

Original Correspondence.

THE WORKING OF FIERY COLLIERIES WITHOUT THE USE OF SAFETY-LAMPS.

SIR.—I believe the opinion is gradually gaining ground that safety-lamps ought not to be placed in the hands of colliers, nor used by anyone working in a fiery colliery, other than the authorised firemen. This opinion is, nevertheless, opposed by many colliery managers, as entailing additional cost on the ton of coal, from the extra cost of circulating the increased quantity of air absolutely necessary if safety-lamps were practically abolished, as stated above.

Whilst pursuing my business I have occasionally to traverse the Aberdare Valley, in Glamorganshire, and have recently come across an example of colliery ventilation there which I feel a duty to the public to bring before its notice. Your readers are well aware that no colliery district in the kingdom is more fiery—and perhaps none so fiery—as the Aberdare. The volume of gases liberated by the celebrated Four-feet vein, and several of the others, is truly astonishing; and their prompt dilution and rapid removal require the exercise of the best skill, and a liberal outlay for sufficient air-ways, &c. The example of extraordinarily good and safe ventilation to which I refer is that which is accomplished at the Nant Melin Colliery, Cwmdare. At this colliery there were raised last year 83,000 tons of coal, and their present get is 400 tons per day. The coal is won from the Four-feet and Two-feet Nine-inch seams. There are, I believe, 400 souls employed underground, and yet this colliery is worked entirely with naked lights, the firemen alone using safety-lamps for their morning examination of the colliery. The air passing through the workings is divided into nine splits. The area of workings is about 250 acres. The number of air splits should be noted, and also that the force for circulating the air is produced by a furnace. This furnace is 12 ft. wide and 15 ft. high inside, and about 3 tons of coal per day are burnt in it. Its position, and that of the upcast shaft, is near one of the boundaries of the colliery, on the "rise" side, and at about 500 yards from the downcast shaft.

Until lately I had no idea that such a thing as a naked light was used in any colliery about Aberdare, and I believe many of your readers will be equally surprised with myself at the instance here given. That district, from the nature of its coals, is of necessity celebrated for skilful ventilation; and other collieries in it might be cited as examples of good ventilation, but I believe none of them may be said to equal Nant Melin in this respect; and its manager, Mr. George Kirkhouse, who is responsible for the safety and direction of this colliery, may justly be proud of its condition, as being the first in the first class. I should hope that the Government Inspector, Mr. Wales, will not fail to draw attention to the fact that this colliery is worked with naked lights, in some of his future reports.

A MISTRUSTER OF SAFETY-LAMPS IN COLLIERIES' HANDS.

May 1.

MINING ENGINEERS, AND ACCIDENT POLICIES.

SIR.—Referring to the correspondence that has appeared in the newspapers lately as to the validity of the policies in the Accidental Assurance Company, and finding that although Mr. Jeffcock was not himself an actual paid servant of the Oaks Colliery Company, still inasmuch as his partner, Mr. Woodhouse, was such, it is quite clear that he (Mr. Jeffcock) was discharging the duties devolving upon him, when he so nobly, and at the same time unfortunately, lost his life. In an emergency like that of the Oaks Colliery, it cannot be denied but that Mr. Jeffcock was in the discharge of his duties; and, consequently, could not be said to have rushed across the country to risk his life, or "expose himself to voluntary danger," as the secretary of the Accidental Assurance Company would have the world to believe. Being myself a holder of a policy in the said company, I have already intimated to the agent, through whom I pay my yearly premium, that unless the directors forthwith reconsider their position, and pay their honest debt, that I shall not only discontinue my own payment, but at the same time will advise every other engineer of my acquaintance, whether civil or mining, to do the same, so long as such line of policy is continued; and I would respectfully suggest to the general body of engineers that they should subscribe to a fund, in order to obtain legal redress against the company for the amount of Mr. Jeffcock's policy. If every engineer would volunteer even a small subscription it could be carried out without putting the family to any expense. For my own part, I am quite willing and ready to pay my mite, and I hope that my brother engineers will act upon the suggestion, and take the matter up in earnest. [I enclose my card.]

April 30.

A MINING AND CIVIL ENGINEER.

EMPLOYMENT FOR CORNISH MINERS.

SIR.—I hear that there are 2000 miners out of work in Cornwall. You would be doing them a great kindness by letting them know, through the Journal, that they can find employment in this district, at high wages, to work as colliers. A COLLIERY MANAGER.

Wrexham, April 28.

THE OPERATION OF THE CHAIN AND ANCHOR ACT, AND ITS FAILURE.

SIR.—When the Act came into operation, the chain-makers were compelled, at great expense, to erect testing-machines to meet the requirements of the Board of Trade, and by these machines were obliged to test the various sized chains to the scale required by the Board of Trade—the Navy test. At the same time that the Government Act was put in force, Lloyd's Committee framed a law for themselves, to the effect that they would not class any vessel unless her chains and anchors were tested at a public testing machine approved by themselves. From this time an inferior class of chains has been made than formerly were required. Prior to these regulations there was a class of trustworthy chain-makers, who manufactured good chains, and obtained a fair price for them. The chain cable that was required to stand merchant proof was sold at a given price, and the purchaser knew what he was buying; and if he wanted a superior chain, to stand the Navy test, then he had to pay a higher price for it, and that price included superior iron, better workmanship, and for the amount paid a first-class chain was supplied. Since Lloyd's stringent regulations on the one hand, and those of the Board of Trade on the other, a great change for the worse has taken place. First-class chain-makers, who hoped that these regulations would not only improve the quality of chains, but prevent all inferior chains being sold, causing good chains alone to be in demand, have been very much injured, annoyed, and disappointed. The purchaser of chains and anchors, knowing what will satisfy Lloyd's, asks the *lowest price of chains—public test* (nothing more is required); and in honest competition in business the manufacturer agrees to supply the article to pass Lloyd's, and now the same kind of chains, sold in time past for merchant proof, are sold for public test, and at the same price. A best chain is not asked for, such as was supplied for Navy test; in fact, it is easy to see why the Act has failed. If the Government had left the case alone, and Lloyd's had taken it up in the way they have done, the object sought would have been gained. Government interference, in its compulsory measure, has done the trade great injury, and lowered the quality of chain-cable, the Navy test being all that is required, and the purchaser not being aware that the *test required* is not a sufficient guarantee for a chain of the *best quality*. For my part, I would not put so great a strain upon them; I am certain it has a tendency to injure the chain, by breaking the fibres of the iron. I would prefer a test just sufficient to try the soundness of the welds, without destroying the elasticity of the chain, or reducing it in size. To ensure good cable chains, the principal thing is good iron; if that is right there is no fear of the rest, and to know you have that inspect it before the chain is made. Try a portion of chain made from it: give it a severe test, if satisfactory work it, if not condemn it. If this plan were adopted there would be good chains. The breaking of chains, and losing of chains and anchors, would be a rare occurrence. If Lloyd's superintendents were employed at the different works, testing the quality of iron, and trying the breaking strain occasionally as new iron came in, the interest of the merchant service would be much better secured. If I were a shipowner I would try my chains in this way. I would be certain of

the quality of the iron. Lloyd's test is not at all satisfactory. As the case now stands, there is no satisfaction for either the manufacturer or purchaser, and the sooner the Act is repealed the better. Why when, as is often the case, hundreds of lives and property of great value are all dependent on a chain-cable, should more inferior iron be used than is put into other chains. In other departments of trade, where life and property are risked, and where there is no Government inspection, or Lloyd's superintendents, good chains are had, and an inferior one is not allowed to be used. In the mines, where the men have to go down the pits, the best of chains are used. We have made these flat and round chains for many years, and iron has invariably been used at a cost from 30 to 40 per cent. higher than is used in cable-chains.

WILLIAM BAYLISS.

Victoria Works, Wolverhampton, May 1.

ENCUMBERED ESTATES COURT (IRELAND).

SIR.—Your correspondent, Mr. George Henwood, in his business-like and practical letter in last week's Journal, on "Encumbered Estates Courts (Ireland)," has made a good suggestion, which I am confident would be carried out if capitalists or their agents knew when such estates as he mentions are in the market, but how are we to know when and through what channels reliable information can be obtained? Few of the Irish newspapers are sufficiently circulated in London, and were they ever so numerously distributed, I presume the catalogue of land sales would be so very extensive as to distract attention, and create a waste of time in perusal to seek for the desired subject: but if the lands supposed to contain minerals, and offering opportunities for investment, were known to be in the market, I am confident many would be the parties who would gladly avail themselves of the chances. Most undoubtedly the well-known mineral wealth of Ireland would be far more effectually developed than at present. I hope his suggestion will be acted on, and that in the columns of the *Mining Journal* we shall read the advertisements and particulars of such estates when on sale.

A REPRESENTATIVE OF UNEMPLOYED CAPITAL.

HISTORY OF MINING—No. II.

SIR.—In my last letter I called your attention to a communication from a clergyman on the Origin of Mining. His letter also referred to the desirability of a succinct, but complete, *History of Mining*. Its history, however, like its origin, is wrapped in obscurity, chiefly so because of the remote antiquity in which it began, the recent origin of printing, and the universality of mines.

It is remarkable that while every zone has its own flora and zoological life, mines are peculiar to none—all zones are rich with metallic treasures. There is gold in the Ural Mountains, in Wales, in Ireland, in Africa, near the line, and in all climates in the western hemisphere, from the snow-clad rocks of the Canadas, to the graceful undulations and hills of Paraguay, just outside the tropic of Capricorn. Silver also is found in the British Isles, in several countries of Europe, in the great continent of the western hemisphere, more especially from Nevada to the confines of Central America. Tin, which used to be considered an exclusively British product, abounds in the great Eastern Archipelago, and lately it has been assigned to other regions. Coal is now known to be almost universally diffused. It is a great staple product of our home islands, it is obtained in Belgium, France, and elsewhere in Europe; it is abundant in America, and found in places of remoter access. It is extremely difficult to say what quarter of the globe is most endowed with mineral treasure. Europe owes much of her modern civilization to it, and there can be no doubt that the future of all parts of America, from the Canadas to Buenos Ayres, will rest much upon the development of their mines. Looking at Europe, how vast the wealth which has been contributed to the common welfare of Great Britain by her mines! The modern prosperity of Belgium turns upon hers. The Iberian Peninsula, once more renowned for mineral riches, has still much. Very many districts of Hungary, such as Schemnitz, Kremnitz, Konigsberg, Neusohl, Schmölitz, Bettler, and Roseman are mineral, yielding gold, silver, copper, lead, iron, coal, rock-salt, &c. The mines of the Alti Mountains lie beneath a vast region. Germany yields silver, copper, lead, iron, cobalt, &c. There was a cry raised some time ago in England among the metal merchants that the copper of the world was nearly exhausted; but the metal is produced in scores of countries the most distant from one another, and dissimilar in climate, such as the British Isles, Germany, Hungary, Sweden, Norway, Chili, Peru, Bolivia, Brazil, Australia, China, Japan, Persia, Arabia, Tartary, Abyssinia, the Ionian Isles, Barbary, Morocco, &c.

This marvellous universality in countries inhabited from a remote antiquity renders it as impossible to trace the early progress of mining as its origin. In England we know that while the Prophet Ezekiel was unfolding the rolls of a mysterious future, "the ships of Tarshish" were exchanging the cloths, stuffs, and other products of Tyre and Sidon at the landing-place of Marazion, in Cornwall, for the tin of that ancient kingdom. At that time there must have been considerable progress made there in actual mining, for the means of carriage were highly civilised in character, and the degree of civilisation attained in other respects considerable. At first the tin was procured there by the simple process of stream-washing. The tin was found in "bottoms," or low grounds, where lumps and smaller fragments of the ore, washed from holes in neighbouring hills, subsided, and were separated from the earth in a granular form by the friction of water. There are vestiges of this remote practice in Cornwall at this day. Lodging in clefts of rocks, or mixed with upper surfaces, considerable quantities of ore would in that early age be found. Deep mines could not then have been worked, for iron was not known then; implements of wood were used, specimens of which are shown in our museums. At a very early period, however, the beds of metal workings at such a depth that they can, even with modern machinery, hardly be kept dry.

The Romans, we know, went beneath the surface, both in Cornwall and Wales, and showed skill and energy. Neither the Saxons nor the Danes very actively followed their example, but the Norman showed their usual energy in doing so. So gradual was the process in every country, from mere stream-washing to mining proper, that no history of the progress could be written which would, at the very least, have an authority beyond shrewd and intelligent conjecture. It was as geology, and, as connected with it, scientific mineralogy, mechanics, chemistry, hydraulics, &c., advanced that mining became a scientific operation and a great enterprise. As these were developed so was it. The invention of gunpowder greatly facilitated mining operations. The old gad (the Cornish word) was, of course, too simple an instrument, and too weak a force, to do what blasting now effects, whether with powder or cotton. Before, gunpowder fire was applied by miners to rocks, with some success. Cornishmen formerly were slow in adopting improvements, as is exemplified in the history of the employment of gunpowder in mines. The Magyars and Germans both lay claim to be the first in applying it, 246 years ago. Half a century elapsed before the English adopted it, which took place at the copper mine of Ecton, in Staffordshire. But even then some Germans were imported to conduct the operation. Fourteen more years elapsed before the West of England men used it, and then credit must first be given to Somerset. From Somerset the practice gradually travelled westward. How little the ancient British old women and girls, stream-washers, in the remote antiquity of tin finding in Cornwall, could dream of such works as one of their descendants, Dorothea or Doll Coath, would give her name to, and how numerous the steps which make the mining history of the interval. The History of Mining, in all countries which possessed an old civilisation is, no doubt, similar to that of our own. But in new countries the mines are at an early period wrought by scientific methods. Whatever degree of interest may now be attached to the history of mining, how trivial it is compared with that which shall accompany its future. Over vast tracts of the earth, now scarcely inhabited, and in regions where, although men abide, civilisation is absent, or but in its infancy, the strokes of the miners' engines, the clanking of the pump chains, and the sound of the pick, the crowbar, and the hammer will be as music to countless thousands of intelligent, industrious, and contented men, who will draw from the womb of our fruitful mother treasures as much greater than we now

receive thence as, we trust, the days of the future will be brighter, more peaceful, and happier than the past. THOMAS SPARGO, *Gresham House, London.*

SLATE QUARRYING IN WALES.

SIR.—Since I have been in Wales I have learnt that an impression prevails that other letters than those bearing my signature, which from time to time have appeared in the Journal, have emanated from me. I only desire that the real facts may be known. I have not for 30 years published a letter on any subject without appending my name to it. A real signature does not give any weight to an argument, but it does more than that, it gives an assurance that the writer believes what he states to be true, and his statements must agree with his known and recorded opinions. Not so often with anonymous writers, who for private objects sometimes put forth statements and arguments in opposition to their otherwise expressed opinions, I have known some cases of that kind in my experience.

Very few insinuations against, or attacks on, *individuals* would appear if the writers were known, and great mischief would be avoided by requiring not only a private (often difficult to be reached), but a public voucher of a writer's sincerity. "A Man of Experience," who does not attack individuals, is quite capable of taking care of himself, and writes like "a man of experience." I know not the writer, who deserves all the credit of his straightforward advocacy of truth. I have no wish to depreciate any quarry property; on the contrary, I sincerely wish success to every honest undertaking of the kind, honestly conducted. Slate quarrying in Wales is yet in its infancy. Carnarvon, North Wales, May 2. THOMAS HARVEY,

THE BRITISH SLATE COMPANY.

SIR.—"A Man of Experience" has chosen to construe the "silent contempt" with which his communications have been treated into an inability to answer his assertions. As it is just possible that such of your readers who are not shareholders may be misled by such an observation, allow me to inform them that the directors have invariably made it a rule, since the commencement of this company, to give their shareholders the fullest information they can possibly require, and to decline answering or taking any notice of the attacks or observations of those with whom they have nothing whatever to do. They have not the slightest intention of deviating from their rule in this instance, and I hope those of our shareholders who very naturally feel indignant at the attempt to injure and depreciate their property will treat such communications in a similar manner. At the same time, permit me to observe that there is not even the shadow of truth in any of the figures or assertions with which "A Man of Experience" has been abusing the courtesy which has permitted their publication in your columns.—April 29. JOHN A. L. BARNARD, Sec.

SLATE QUARRYING IN WALES.

SIR.—In the Journal of April 20 I observed a letter from an anonymous correspondent, who signs himself "Moel Hebog," and who makes the following statements respecting this quarry:

"That it is a narrow vein of slate of a singular dark colour, classed 'feruginous'; the slate difficult to sell, and that all the practical men in the neighbourhood state that it had never paid its working expenses."

Permit me to reply by stating that the slate vein upon this property is as wide, if not wider, than any other slate vein in Wales, that it is of a light-blue colour, that I never heard it classed "feruginous" or any such absurd title, that I have always had twice as many orders in hand for slates as I could supply; and, lastly, that no practical men exist in this neighbourhood. In fact, this property is situated in the middle of a range of mountains, 1800 ft. above the level of the sea; all the workmen have to be barracked. It is, indeed, so isolated that there are only some two or three small cottages of mountain farmers, and with the exception of when the directors or shareholders visit the quarry, or some adventurous tourist in autumn, I do not see a strange face from one year's end to another. The nearest quarry is that of Lord Penrhyn, some seven miles off, and the nearest to that are the Llanberis Quarries, 20 miles from this place. Perhaps it is needless to add that the opinion put into the mouths of these practical men is as utterly fictitious and as devoid of truth as the statements in "Moel Hebog's" letter.

The next time your correspondent writes I hope, if only to show that he has some knowledge of what he is writing about, he will give your readers the information as to the width of the slate vein upon this property, as also the width of the other slate veins now being worked in Wales, and that he will also give the names of the practical men who are my neighbours. I shall be delighted to make their acquaintance. And, Sir, may I add, it may be the ignorance of a person living 1800 feet above the level of the sea all the year round; but I confess I cannot help thinking it strange that the assertions of some practical men, not only equally anonymous, but non-existent, and calculated to damage and injure property with which they have no connection, should have been allowed insertion in the columns of a respectable paper like the *Mining Journal*. It is so easy to write that practical men say so and so—so easy to make sweeping assertions and charges against either property, companies, or individuals leaving the onus of proving that such statements are false upon the accused party, that any correspondent making such assertions should be bound, not only to sign his name to the same, but also give detailed information upon which such assertions are made; and, if they are made upon the authority of others, give their names also, and failing doing that to your satisfaction his communications have no right to the publicity of your Journal.

Cwm Eiggia Quarry.

[ADVERTISEMENT.]

THE BRITISH SLATE COMPANY.

SIR.—In his notice of what he fancies is a blunder, "Truth" has only found a mere's nest of his own making in his letter in last week's Journal. I was quite aware 15,000 tons of slate a month are 18,000 tons a year. But whilst fixing 18,000 tons as the limit of profit to be divided in good quarrying, I gave those who might think 12,000 not too much the benefit of a difference of opinion, and said: "Therefore 15,000 tons a year is within the paying mark." "Truth" says: "Had he the figures to start with that I have," &c., and then does not give us one of them. Is not this quite destructive of his signature? The conclusion is irresistible. He gives us heaps of words—much ire, but no answers to my plain questions, though such answers, if sufficient, must have been fatal to any design of "bearing" British Slate Company's stock, had he really fancied (which I do not believe) that I wrote for that purpose. The directors are wiser in their generation, but their prudent silence will avail them little if this correspondence is prolonged. Bit by bit so much of the truth will come out as will leave at last but little to be hidden or revealed. I now learn from "An Old Shareholder" that of 100,000⁰ stock only 70,000⁰ has been issued. "A Shareholder" before told us 60,000⁰ had been expended in quarry workings. This renders another question in addition to the two former, which I now repeat—

I.—What was the produce in tons of slate and slabs of the Cwm Eiggia Quarries in 1866?

II.—What was the amount actually paid in cash to shareholders of the division declared in March last by the British Slate Company?

III.—What would be the balance in hand, after payment of all debts and liabilities, when the British Slate Company declared their last dividend?

Where in a quarry the produce so far exceeds cost as to allow reserves out of compound interest, continually increasing produce to provide further capital, to be reinvested in the same way. But when dividends are paid out of capital continual additions are made to the dead weight of unproductive capital increasing at compound interest, which at 9 per cent. would rapidly accumulate, so as to prevent even a good quarry from yielding any profit.

April 29.

A MAN OF EXPERIENCE.

PROSPECTS IN THE CAMBORNE DISTRICT.

SIR.—Comprised within a circle of about four miles are mines which have yielded in the aggregate millions sterling of mineral wealth. More than a century mining has been carried on successfully within this area, and it is still the greatest tin-producing district in England. Dolcoath having within the last fifty years returned 3,144,542⁰, worth or mineral, while the mines adjoining have produced equally fabulous amounts. About the richest part of this great district is, perhaps, that group of mines which embraces South Crofty, Tincroft, Dolcoath, Cook's Kitchen, North Roscar, North Crofty, and that part of East Crofty to be in future carried under the name of WHEEL CROFTY, it being situated in the centre of those rich mines, and having some of the same tides traversing the whole length of the set. The present market value of the mines named is about 280,000⁰, which will increase as the price of mineral advances, and of which there is every probability. The mineral in this part occurs in what may be termed the greenstone slate, and which I have never known (whatever district it may be in) to fall in producing large quantities of copper and tin. In this rock may be seen minute veins of beautifully crystallised carbonate of lime, and wherever they are met with it is in connection with masses of ore below—instances of which occur in the rich Botallack Mine, St. Just, as well as in the Croftys, and, indeed, all other

which has made this neighbourhood so famous of late; hence it is that the public have been so anxious to get an interest, remembering as they do that a similar discovery some years since caused the Dolcoath shares to rise from 10s. to 60s. each. Again, in SOUTH CROFTY, improved prospects of the mine in depth have enhanced the value of the property 100 per cent, and that, too, in a few months only. The discoveries which have been made here, as well as in North Crofty, have stimulated an influential party to work WHEAL CROFTY, which is a continuation of the South Crofty lodes to the west, and having some of the same which will recommend itself, and, as a rule, whether it be in mining or not, if you have anything tangible to offer the public, there is no necessity for going begging with it; hence it is in this case that as soon as the required grants were obtained the shares were immediately sought after. It is divided into 6000 shares, at 1s. each, to pay for machinery, and provide a working capital, which is comparatively nothing when the value of such ground is taken into consideration. The great or Dolcoath cross-course traverses the centre of the mine named, and, indeed, it is in connection with this that such rich and lasting deposits have been found, and are still being discovered. Suffice it to say, that two adjoining mines on the same lodes as Wheal Crofty have within the last six months enhanced in market value the large amount of \$4,000. Here, then, are two instances on the same lodes that deeper sinking is only required to ensure the like success, and which will be carried on with the utmost vigour; I, therefore, advise my numerous friends and clients to be up and doing.

St. Day, Scorrier, Cornwall, May 1. — CHARLES BAWDEN.

GREAT RETALLACK MINE.

SIR.—Some weeks since you did me the favour to insert a few remarks on this mine, drawing attention to its excellent prospects, and strongly urging my fellow-adventurers not to part with their shares. I am proud to think my anticipations of the success of this mine should so soon have been realised, for I am sure no one can read the report presented at the recent meeting of Great Retallack adventurers without being astonished at the progress made at the mine, and the present highly satisfactory character of the prospects. The shaft on No. 2 lode has been sunk 10 fathoms in six weeks, and by the end of this month the 20 fathoms level will, in all probability, be reached. In the south end of the 10 fathom level the lode is worth 2 tons of lead per fathom, driving at 21s. per fathom. The shaft is worth 1½ ton, sinking at 6s. per fathom. This easy ground will admit of rapid progress, and if the lode should continue only half as good as at present, the mine will speedily make good profits. This state of things is so different to what it was a month ago, that it seems like the work of magic. At any rate, it shows what an effective and energetic management can do. That Great Retallack will be a good paying mine there is now not the slightest doubt. It is, however, to be regretted that the Great Retallack shareholders did not take up the sets to the north when offered to them more than a year ago. This ground, which has upwards of ½ mile on the run of Great Retallack lodes, is now being worked as North Retallack; and anyone who has seen the ground will bear out my views that there is in this North Retallack one of the finest and safest speculations of the day. Finest, indeed, as the ground is very extensive, and the two lodes in Great Retallack will there form a junction; and safest, because the lodes can be inexpensively worked by simply sinking a shaft just on the boundary of the two sets, and taking up Great Retallack levels as they are driven to the boundary. The Great Retallack adit will be up to the boundary in a month's time, and the lead in that mine is dipping north, or into North Retallack. With a full pair of men, each level in Great Retallack will reach the boundary in six months, and it will thus be paid that I do not speak strongly of North Retallack chances without cause. I would, therefore, strongly advise my fellow-shareholders in Great Retallack to secure, if possible, an interest in North Retallack. As one of the largest shareholders in the former mine, I have myself done so to a considerable extent, for I feel satisfied that the two Retallacks together form one of the finest sets in the county of Cornwall.

A SHAREHOLDER.

SORTRIDGE CONSOLS.

SIR.—A heavy call, of 8s. per share, was made for the purpose of sinking to the junction of the main and south lodes, as recommended by the agents, who calculate on arriving at this point at a depth of 146 fathoms, the shaft being now down 137 fathoms. To prevent disappointment I will, however, be well for the shareholders to consider that the main lode in the 122, where last seen, was some 5 or 6 fathoms north of the shaft, whilst the south lode has not been seen at all below the 50, where its underlie is 1½ ft. per fathom north; but it may, therefore, be taken a more perpendicular course in depth; and that this is the case appears to be confirmed by its not yet having come into the shaft, where it ought to have been met with some 4 fathoms above the present bottom, unless it has been split up into branches, referred to in the report. There may, however, be another cause for its absence, as a part of the main lode lies to the south of the shaft, and as where last seen it was as large as the south lode itself, and having a south underlie, it may have carried off the south lode with it, thus leaving the shaft to be sunk between two parallel lodes. I have a high opinion of the chance of discovery in depth; but, from the above circumstances, I think it would be advisable to remove the men now driving to cut the south part of the lode, west of the cross-course, in the 40, to cross-cut south in the 13, which would entail an additional cost; and, on finding the south lode in its expected position, would impart confidence to those shareholders who are now doubtful of the probability of the junction of the main lode with any other at a reasonable depth.—May 2.

ONE INTERESTED.

MINING IN CALIFORNIA.

The files of the *Mercantile Gazette* of San Francisco, together with the notes of one of our correspondents, enable us to give the following summary of the various mining operations in California during the last year. Besides the precious metals, which have heretofore been the chief objects of mining enterprise in California, almost every metallic and mineral substance known to science or useful in the manufacturing arts has been found in greater variety than in almost any other region of like extent on the face of the globe. Capital is already largely engaged in the extraction of coal, copper, borax, and quicksilver; sufficient coal is being raised to aid materially in meeting the large and increasing demand for fuel; while of borax and quicksilver, after all home requirements are supplied, more than a million dollars worth is exported yearly; copper ores are also largely exported; manganese, lead, sulphur, nitre, and plumbago, with several substances of less importance, are obtaining attention. Iron ores of excellent quality exist in many localities, and preparations have been made for smelting and manufacturing the same, both in California and Oregon.

The discovery of gold in California inaugurated a new business era; a universal spirit of adventure stimulated commercial enterprise, and by opening new fields for its exercise imparted a great impulse to every branch of industry. With its inauguration the prices of labour were advanced, agriculturists and manufacturers flourished, and the whole country entered upon an epoch of material prosperity unexampled in the history of the world.

THE GRASS VALLEY DISTRICT.

Continues to be one of the most important mining localities in California, and the magnitude of the quartz interests at this point has attracted more attention than ever during the past year. Here are to be found not only the most thoroughly developed, steady paying, and productive claims in the States, but also the best evidences of permanency at greater depths than have been attained elsewhere. The following statistics will serve to show, in some degree, the operations and present condition of a number of mines in that district, beginning with—

The EUREKA, probably one of the richest gold mines in the world. The gross yield of bullion for the past year amounted to \$596,083, and the dividends declared to \$360,000, an average of \$30,000 per month. The company have now on hand about 75 tons of sulphurates, worth at least \$30,000, and a large amount of timber and other supplies, valued at \$15,000. In addition to this, \$27,000 were a short time since expended for new machinery and improvements. The earnings of the mine, including the actual dividends paid, have amounted to \$432,000 for the year 1866. During that period 12,200 tons of ore were reduced, giving an average yield of rather more than \$45 per ton. The Eureka has thus far been worked to a perpendicular depth of only 300 feet, and a length on the vein of 725 ft. A new level is now being opened 100 ft. deeper, and a new shaft is also in progress.

The NORTH STAR has the advantage of being thoroughly opened, and is a mine of great value. The main shaft is now down 750 ft., with a vertical depth of some 210 ft. The third level extends 550 ft. east on the vein, the next above about 600 ft. in the same direction, and the lowest, or new, level is being driven upon. The width of the vein throughout the mine will, perhaps, average 2 ft., and a very considerable portion above the three lower levels is virgin ground, extending to the surface. It is estimated that fully 20,000 tons of ore remain untouched in the reserves. This company have declared dividends at irregular intervals since 1852, and during the past five years a net profit of more than \$600,000 has been realised. The gross product from their new 16-stamp mill for the past five months has exceeded \$100,000, the last monthly yield being \$26,000, and the net profits now range from \$12,000 to \$14,000 per month.

The ALLISON RANCH has, owing to a lack of harmony among some of the owners, not been very profitably worked during the past year, but of late certain discordant elements have been removed, and a more vigorous policy may be anticipated. The gross yield during the past ten years, since it was first opened has been about \$2,350,000—the product for the three years ending Dec. 31, 1865, being \$1,900,000; but for the past year less than \$200,000.

The OPHIR from 1852 to 1864 yielded about \$1,000,000, and since it came into the possession of the present owners more than \$300,000 have been extracted. During the past year some 3750 tons of ore were reduced, producing about \$175,000, or an average of \$47 per ton. A magnificent 30-stamp mill was erected last summer, involving an outlay of more than \$100,000, and \$50,000 additional was expended upon a new shaft, hoisting works, &c.

The UNION HILL is situated on the same range with the Eureka. Recent developments, at a depth of 200 ft., show a shoot of ore nearly 500 ft. in length, varying in width from 15 in. to 5 ft., and the incline is being sunk for a new level. A new mill was erected last summer, capable of crushing 40 tons of ore daily. The yield of the ore varies from \$18 to \$40 per ton, and the produce of the mine has of late been as high as \$100 per day. With further development this mine is likely to take a prominent position among the best properties of Grass Valley.

At the GOLD HILL operations were begun as early as 1850, by a large number of parties occupying small claims, 30 x 40, and the first Gold Hill mill was erected in 1851. An authentic history of this property cannot be obtained, but it is popularly supposed that during the 14 years ending with 1864

at least \$4,000,000 were taken from the entire hill, at a vertical depth of not more than 175 ft. Operations were suspended in the spring of 1865, until September last, since which time developments of a very promising character have been made in the north and south mine. In the incline, at a depth of 350 feet, and up either side of the shaft in drifting from the bottom of the old shaft, 275 ft. deep, a ledge of fine ore, varying in width from 1½ to 3 ft., has been disclosed. This ledge is identical with, and some 500 ft. north of, the famous Watt Mine, upon Massachusetts Hill, which yielded a net profit of \$960,000 in three years, and is doubtless a continuation of the same vein.

The CAMBRIDGE has been opened during the past few months east and west of the shaft, at a depth of more than 200 ft. The ledge shows an average width of 2 ft, throughout the stopes, some of which extend to the old level above, exposing a face of 100 ft. in height. This company erected last summer a substantial 10-stamp mill, capable of crushing 20 tons per day, together with hoisting and pumping apparatus. Their mill was started in November, and the ore crushed thus far gives an average yield of \$38 per ton.

The NEW YORK HILL is said to be in a promising condition, and some 500 tons of good ore have recently been hoisted to the surface. The Rocky Bar Mill has commenced crushing for this company, and it is thought that it can be kept running upon ore from the New York Hill Mine alone.

The NORAMBAGUA Mine and Mill were sold last August to parties in San Francisco and Grass Valley for \$100,000. During the past two months, under economical and judicious management, this property has been earning an interest of about 4 per cent, per month upon the amount invested.

The HUENEMER HILL is also doing well, with an average product of 120 tons of ore per month, worth \$100 per ton. The cost of mining and reduction amounts to \$45 per ton, but notwithstanding this high cost the company within the past year have erected new hoisting works, involving an outlay of \$30,000, and divided some \$60,000 among the stockholders. The company are now at work in their 300 ft. level, the north end of which is said to disclose ore worth \$160 and \$170 per ton.

The LUCKY (upon which a 15-stamp mill was erected last year), the STOCKBRIDGE, FORD and RILEY, SCADDEN'S FLAT, ROCKY BAR, BOSTON RAVINE, and KATE HAYES mines may be regarded as claims of approved value.

There are many other mines in this vicinity, and a number of them last year more than paid expenses, but we have not space to allude to them in detail.

AMADOR COUNTY.

The EUREKA affords a striking refutation of the Murchisonian theory that quartz veins, however rich they may be near the surface, become impoverished, if not wholly valueless, at great depths. This mine was opened in 1853, and the bottom of the main shaft is now 1230 ft. from the surface. Most of the ore extracted thus far has been taken from different levels, at a greater depth, we believe, than about 930 feet; but a new, or lower, level is now being opened, 270 feet deeper. Less than 200 feet of drifts have been run from the shaft at this point, but sufficient explorations have been made to disclose a vein of pay ore, averaging 16 feet wide. The pay shoot in the levels above extends from 350 to 500 feet in length, and it is estimated that between the new, or lower, level and the 930 ft. level 1,500,000 tons of ore, worth \$15 to \$17 per ton, can be taken. The yield of this mine during the past year has been about \$450,000, the company's two mills having crushed 80 tons of ore per day. The gross product of this claim from 1852 to 1865, inclusive, exceeds \$1,200,000, and since it was first opened it has produced more than \$3,000,000.

The KEYSTONE is beginning to take high rank, and from October, 1865 to the close of 1866 some 9000 tons of ore were reduced, yielding \$175,000. During that period \$75,000 were expended in the construction of a new 20-stamp mill, and other substantial improvements, and \$50,000 were disbursed to the owners in the shape of dividends. The total yield of this mine since 1851 has been about \$1,00,000.

The SEATON is now in a condition to pay good dividends, \$75,000 having been expended during the past 12 months in the erection of a 40-stamp mill, and the thorough development of the ground belonging to the company. Their new mill commenced running on Dec. 18, and is capable of crushing 60 tons of ore per day.

A large number of other mines in Amador county are in a dividend-paying condition, but reliable statistics respecting many of them are not at our disposal.

TUOLUMNE COUNTY.

The well-known SOULSBY MINE, from which more than \$1,200,000 has been realised, is now doing better than for years past. The vein of pay ore extends a distance of more than 1700 ft. in length, but is sometimes very narrow, and exceedingly difficult to work. During the past three years it has yielded some \$400,000, and has made fair profits.

The APP MINE was worked between 1856 and 1859 at intervals, but uninterrupted since the latter date, and with a very regular yield. From May 1, 1859 to Sept. 1, 1866, there were crushed 8027 tons of ore, yielding an aggregate of \$124,575, or an average of \$15.52 per ton. The expenses of mining and milling have meanwhile been \$7.47 per ton, showing very good results, in a small way.

The RAWHIDE RANCH passed into the hands of Eastern owners some time since, and is being opened. About 1500 tons of ore were extracted during the past year. The ledge, in the deepest shaft, 200 feet from the surface, is said to be 10 feet wide, most of which contains fair pay ore. The company have a 20-stamp mill.

The gross yield of the GOLDEN RULE for 1866 was \$32,554, from 3000 tons of ore, an average of \$10.75 per ton. During the year 1865 four dividends of \$1500 each, were declared. During the past year \$13,000 were spent in the erection of a new 15-stamp water mill, and two dividends of \$1500, paid.

KERN COUNTY.

From several leading mines here there are favourable advices.

The WALKER COMPANY in October last completed a 20-stamp mill, which has been kept running for some weeks past, giving an average daily yield of about \$1200, from 30 tons of ore. One-sixth of this mine was recently sold for \$30,000 to parties in San Francisco. The entire property was purchased in June last for \$2000. The ledge is opened to a depth of 200 feet, with an average width of 5 feet.

The LONG TOM, situated about 25 miles west of Havilah, continues to give good results. Receipts of bullion, from a 10-stamp mill, for the month of October were \$16,500, and in November \$17,500. During the month of December they amounted to \$20,000. The entire expenses of the mine and mill are said to be less than \$3000 per month. The lode is now being worked at a depth of 200 feet, and varies in width from 3 to 8 feet.

The MAMMOTH COMPANY have erected a first-class 20-stamp water-mill on Kern River, situated eight miles north of Havilah. This company have a number of promising leads in that locality, but are now working the Mammoth, once so famous for its richness. Prior to the floods of 1861-62, which swept away the mills of the old company, over \$1,000,000 were taken from this claim. The new company commenced operations last spring.

SIERRA COUNTY.

The SIERRA BUTTES, twelve miles east of Downieville, continues to maintain its former prestige. It was first opened in 1851, and worked with arrastres until 1856. Since 1857 the total yield of bullion has been \$1,300,000, with a net profit of some \$850,000. During 1866 the product of the mine exceeded \$200,000, and the net earnings were about \$150,000. This mine shows one of the largest pay lodes in California, and is worked by adit levels, with almost inexhaustible backs. The crushing capacity of the company's mill, propelled by water, is about 780 tons of ore per month; the total cost of quarrying and crushing is \$4.50 per ton. It is said that a refusal of this property, for sixty years, has been obtained, at the rate of \$575,000, with a view of placing it in New York at higher figures.

AMERIFEROUS SOFT SLATE DEPOSITS.

Much attention has been of late directed to a class of gold-bearing deposits in the rocks without any well-defined quartz veins, and hitherto known to only a few persons as containing sufficient gold to be worked with profit. These deposits are found in the copper-bearing belt west of the main gold belt of the State, and in the foot-hills of the Sierra. Several of these deposits, now known to be rich in gold, were first located and opened as copper claims, the rusty, ochreous outcrops, from their variegated colours, being supposed to indicate the presence of copper ores. In excavating for copper, the soft, ophry slate were found to contain gold. The Banker, or Harpenden claim, at Whisky Hill, in Placer County, has this character, and has been worked on a moderate scale with a 5-stamp mill during the past year. The hill rises 100 feet above the plain, and the metalliferous outcrop is from 200 to 300 ft. in breadth, and about 500 ft. in length. Over the whole of this surface the slate outcrops are charged with iron rust, and appear in some places like great blocks of iron ore. On digging down the rock becomes softer, is more sandy or talcose, and shows when washed free gold almost everywhere. This material is excavated in an open cut or quarry, loaded into cars, and conveyed to the mill. The softness and abundance of the material allows it to be worked at a very small cost; from 25 to 40 tons are passed through the mill in 24 hours, being at the rate of 7 or 8 tons to a stamp. An abundance of water and very coarse grates were first used, and the material which passes the batteries was ground in large pans. Even with this rude and imperfect way of washing, the material is said to have yielded from \$5 to \$6 per ton, but from the new mill, recently erected, the average grade has exceeded \$9 per ton.

It is difficult to account satisfactorily for the origin of these deposits. They may be considered as large masses of mineralised rock, without any vein. Some geologists regard them as formed very much in the same manner as veins, the ore rising in solution from below, and permeating the slates in all directions. The immense quantities of this gold-bearing material above the water level, and in a condition to be so rapidly mined and crushed, arrested the attention of some of our enterprising mining capitalists during the past summer. Their investigations resulted in a purchase of half of the above-described grounds near Lincoln, and the erection of a 40-stamp mill thereon, which is now at work. Other deposits of a similar nature exist in Calaveras County, one of the most prominent being Quail Hill. At this place the soft slates are variously stained and coloured by the oxide of iron over a length of 1000 ft., a breadth of about 300 ft., and a depth of 180 ft. above the water-level. They show gold freely when washed or sluiced, and have given very satisfactory results by working in this way for some years past. A shaft has been sunk through these slates to a depth of 110 ft., at which point some of the rock yielded \$100 per ton. Ores selected from various parts of the hill yielded, by mill process, an average of \$36 in gold and \$9 in silver. It is estimated that the cost of mining and milling this soft slate will not exceed \$1 per ton. None of the gold mines in the Coso and Independence districts are now at work, since they labour under the disadvantage of being far removed from civilisation, in localities where wood and water are both scarce. The Indians have also recently been very hostile, and the mines generally have not afforded satisfactory results.

COPPER.

It is not yet six years since copper became the subject of mining enterprise in California. Prior to that time, although many veins had been discovered, not one had been opened to any depth, nor had the receipts of ore at San Francisco amounted to more than a few hundred tons, from veins in the vicinity of Crescent City, with some small lots previously received from Arizona. With the development of the mines at Copperopolis this ore began to be one of the staple articles of export. The exports, however, have been less for the past than they had been for some preceding years, owing to such material advancement in freights to foreign ports as to preclude the further shipment of low grade ores, and a number of parties occupying small claims, 30 x

Meetings of Mining Companies.

YUDANAMUTANA COPPER MINING COMPANY OF SOUTH AUSTRALIA.

The fifth annual general meeting of shareholders was held at the London Tavern, Bishopsgate, on Tuesday,

Mr. HENRY HILLS in the chair.

The report of the directors stated that the amount received on sales of copper and ore during the year was £65511. 17s. 2d., and bills of lading are to hand for copper and ore estimated to produce 76237. The working expenditure for the period named was £4691. 14s. The collective value of copper and ore at surface, on the mine, in the reservoirs, and at port, with the value of fuel in stock, represent in addition about 58,435l., which, however, includes the value of ore in levels, floors, and reserves, estimated at 22,500l., while the general assets, as per colonial schedule, give an excess of gross assets over liabilities, inclusive of the above, of 138,373. 2s. 4d., subject to the cost of realisation, and to the depreciation of plant, machinery, &c. The value of rough copper has fallen from 90s. to 70s. per ton, and the sum of 6290l. 2s. 2d. has been accordingly allowed for depreciation in value of last year's stock of copper and ore. In consequence of the large quantity of surplus ores at surface at Blinman Mine waiting reduction, the only underground works now prosecuted are the stoping at the bottom of the 10, north of No. 4 shaft, and the back of the same level south of the big bunch; at both points the lodes are holding good. The number of men employed on the mines and at the smelting works, in all capacities, is 48. With respect to the smelting works, the directors have to report that the reduction of the ore into metal has now become regular and progressive. Two furnaces are now turning out, on an average, about 30 tons of copper per month. A third furnace is nearly ready for work. The delivery of firewood during the past half-year has exceeded 6000 tons. The disastrous effects produced by the drought in checking the progress of this company and other mining properties have induced the Colonial Legislature to remit the rents from date of last payment for three to five years, according to the respective distances of the mines from Port Augusta, which will apply as to the former to Blinman, and as to the latter to the Yudanamutana.

The CHAIRMAN having referred to the leading statements in the report of the directors, stated that it was a source of gratification to him to be in a position to inform the shareholders that since the annual accounts were made up the last three months' smelting at the mines had been very satisfactory, for during the eleven months of 1866 there were 73 tons of copper shipped, whereas during the last three months no less than 75 tons of copper had been shipped, and a further quantity of 64 tons was in course of transit—thus showing a considerable increase in the rate of production with only two furnaces. Since the accounts were made up the colonial liabilities had been reduced to the extent of 1734l., and sufficient copper left to cover the entire colonial liability. Hitherto the superintendent had drawn 70s. per ton against the copper made, but recently it had been reduced to 60s., and for the future it would only be at the rate of 50s. per ton, which, notwithstanding the present low price of copper, it was confidently expected would, upon realisation, leave a good balance in their favour. Having stated that he should be glad to afford any further information that shareholders might desire, he concluded by moving the reception and adoption of the report.

A SHAREHOLDER asked whether any decision had been arrived at relative to the reduction of the whole of the ores before shipment to this country?—The CHAIRMAN said that it had been decided not to ship any more ore, but to reduce it to copper.

A SHAREHOLDER suggested an alteration in the form of the balance-sheet, in order that a profit and loss account might be shown.—The CHAIRMAN said that it was the desire of the board to adopt that suggestion as far as practicable.

Mr. MARCUS said the idea of showing a profit and loss account in a progressive mine was absurd, and would, to a great extent, be illusory, if not fictitious.

It was understood that the directors coincided with the suggestion with reference to future balance-sheets, although the accounts rendered were perfectly clear. Some remarks were made with respect to the insertion in the balance-sheet of ore in reserve as an asset.

Mr. SALMON reminded the meeting that on former occasions the shareholders had requested information as to the quantity and value of the ore in reserve, and it was solely in obedience to that request that Capt. Anthony was instructed by the board to furnish the required information, and hence its appearance in the colonial schedule of assets. It was inserted more for information to the shareholders than for anything else.

The AUDITOR stated that his impression was that the value of ore in reserve ought not to be taken as an ordinary asset.

The CHAIRMAN said the ore in reserve was, no doubt, a real asset, the ore being in sight, and by a trifling outlay could be brought to surface, and made an available asset.

Mr. SALMON mentioned that Mr. Martin had returned to the colony with the view of obtaining from the Colonial Legislature more definite and liberal terms for the construction of the railway from Port Augusta to the mines.

The motion adopting the report and balance-sheet was put and carried.

The retiring directors, Messrs. Bartram and Salmon, were re-elected.

Mr. HARVEY, the retiring auditor, stated that having served the office for two years he considered another shareholder should be appointed, to make himself acquainted with the affairs of the company. He, therefore, should propose that Mr. Goodson should be appointed his successor, which, being duly seconded, was put and carried.—A vote of thanks to the Chairman concluded the proceedings.

CHONTALES GOLD AND SILVER MINING COMPANY.

A general meeting of shareholders was held at the London Tavern, Bishopsgate, on Tuesday, —The Earl NELSON in the chair.

The notice convening the meeting was read.

The report of the directors (an abstract of which appeared in last week's *Mining Journal*) stated that some disappointment must naturally have been felt at the non-fulfilment of the promises held out by Captain Paul within the time he had predicted. The directors, however, cannot but congratulate the shareholders on having passed from the stage of sanguine expectation to that of practical matter of fact. The commissioners have fully answered the expectations formed of them, and by their zealous efforts, sound judgment, and wise discretion, have rendered great service to the company. Their timely arrival have saved the company from many serious troubles, and have enabled the directors to thoroughly understand the position of affairs at the mines. The directors had hoped that Mr. Truran's return by the last mail would have enabled them to bring before the shareholders a vivid record of everything relative to their mission. Unhappily, Capt. Hill's health suddenly gave way. Mr. Truran and Dr. Robinson accompanied him to the ship with every attention, but the directors regret to say that he died on the voyage. Mr. Truran, who was to have returned home, has, with true devotion to the duties of his mission, determined to remain at the mines until a permanent commissioner can be sent out. Under these circumstances, and as so condensed a report has been received from the commissioners, the directors have thought it right to submit a series of extracts from the correspondence of the commissioners. The directors have the distinct assurance of the Central American Association that the purchase of the Javall Mine by Dr. Seaman was entirely without instruction from their board, and took them, as it did the directors of this company, by surprise. Many of the officers of the mine during Capt. Paul's absence, and in ignorance of the directors' instructions to him, strongly recommended Dr. Seaman to make the purchase, from a belief that that company was intimately connected with the Chontales Company. Although Capt. Paul has had many and great difficulties to contend with, he has doubtless laid himself open to censure, but the more serious charges laid against him before the commissioners were not have not been substantiated; and nothing has hitherto led the directors to doubt his earnest desire for the welfare of the company. It is, however, expedient to continue a permanent commissioner for the purpose of controlling the expenditure and the general administration of the affairs of the company in Nicaragua. The accounts previous to August have been found much complicated; but Mr. Truran shrinks from no labour in his determination that everything shall be made straight. He will allow nothing without vouchers, and will compel all inaccuracies to be made good. The directors will be in a position to present a correct account of all receipts and expenditure from the commencement of the undertaking, to be laid before the auditors previous to the annual general meeting in October next. With respect to the mines, although the work already accomplished is very great, still much remains to be done. The directors have, however, a confident belief, unless unforeseen circumstances occur, that regular and substantial returns may be expected from the mines by July or August next. The directors are happy to add that they have been enabled to comply satisfactorily with the commissioners' request for an efficient accountant by sending out Mr. Burgess, who, during Mr. Truran's absence, has acted as secretary to the company. They hope that he has arrived at the mines, and that he will be of great assistance to Mr. Truran in his present position. The directors are anxiously seeking for a commissioner to relieve Mr. Truran, whose return will be of importance to the company, and whose presence, as secretary to the board, will be now rendered doubly valuable from his personal knowledge of the property.

Copious extracts from the commissioners' letters are appended to the report, in which the fullest belief is expressed in the ultimate value of the mines, but not in the time Capt. Paul had expressed himself able to make them profitable. In the extracts from the statements by Capt. Paul relating to work done, the following passage occurs:—"Nothing of importance has been left undone, whilst from the beginning to the present time everything has been done that could be forward to the ultimate success; and I can now with greater confidence and assurance assert that the truth of my reports hitherto given will all be verified, and that a great success will be achieved. It is merely a question of time to solve the doubt, or to verify the statements."

The CHAIRMAN said that before proceeding to refer to the information communicated to the shareholders in the report which had been circulated by the directors, he would advert to a statement made in a letter that appeared in the *Mining Journal*, to the effect that such companies as these should not be introduced to the public before they were in a position to at once pay dividends. Now, as far as the directors were concerned, they had from the first set their faces against anything like puffing, but they could not possibly help what was done by other people; and, as an instance, he might mention that the last report from the mines was, as usual, sent round to the newspapers, but some inserted only one paragraph, which stated that in the Consuelo Mine a good vein of ore had been met with. In making this statement, all he wished to do was to remind the shareholders that from the first the directors had put forth that which they believed—and which they still believed—the company possessed a valuable property, but that the way in which its value was to be realised was by the employment of English capital. It was impossible to realise a dividend until the capital had been applied, and it was equally impossible to apply the capital before it had been subscribed. There was no doubt, however, the statements put forth by others had engendered a great deal of sanguine anticipation among the shareholders—for instance, when Capt. Paul stated that he believed he would be able to send home at a certain period 700 ozs. of gold per month, most of the shareholders were prepared to expect such returns—indeed, they all believed it was rather under than over the amount that might be expected at that time; and, therefore, it was that the directors had in their

report "congratulated the shareholders upon having passed from the stage of over-sanguine expectation to that of practical matter of fact." (Hear, hear.) The shareholders were aware that in consequence of adverse rumours which had been set on foot against Capt. Paul, it was found necessary to send out a commission, and that the result of the investigation was that those rumours were confounded, while confirmatory opinions as to the capabilities and productiveness of the mines were received. In fact, the whole of the statements of the commissioners tended to show that the company possessed a really valuable property, but that a great deal of "dead work" was necessary to be done before the wealth of the mine could be realised. Happily, a large proportion of that work had been done, and although the outlay incurred in which was for the time unproductive, it was absolutely necessary for the eventual economic development of the property. (Hear, hear.) Shareholders would recollect that from the first it was estimated, it would take 2½ years to get the mines into an effective working condition, and that there would be an outlay of 3000l. per month, in addition to 25,000l. for machinery. Now, those estimates had not been exceeded—he meant to say that certainly 2½ years had not expired, that the monthly cost had not been more than 3000l., while the item for machinery had certainly not come up to anything like the computed amount. The directors in their report had been extremely careful not to put anything in an overflattering light—there was now no doubt that the machinery which it was said could never be got up to the mines could be taken up, and both of the commissioners were of the opinion it would be on the mines—not erected—by the beginning of the ensuing wet season. (Hear, hear.) As to the amount of returns, that the commissioners had stated would depend entirely upon the number of arrastres and mills they were able to put in operation. He need hardly say the board had urged upon the commissioners to do all they could to expedite the erection of this machinery, for as soon as that was done the shareholders might look for considerable and continuous remittances. When he said that he did not mean to say they would be able to at once do without other assistance, but as far as their knowledge at present went they believed, if no unforeseen circumstances arose, that by July or August—they hoped July—they would receive substantial and continuous returns from the mines. (Hear, hear.) There was another point to which he wished to refer, and that was relative to the disappointment felt at the non-fulfilment of the promise made by Captain Paul of a monthly remittance of 700 ozs. of gold. It was but fair to Capt. Paul to point out that he had intended to work the old mills for a time, but that the commissioners, as stated in their advices, set their faces against such a mode of working, as they knew very well there would be paid a heavy price monthly for a few ounces of gold, much more than would be incurred by and-by to return the same quantity when other and better machinery was erected. Therefore, it was not to be supposed the non-fulfilment of this promise arose from a falling off in the productiveness of the mines, for it was fully explained by the circumstance above referred to. He might further state that the directors were most anxious that nothing should be kept back, but that any shareholder calling at the office would be supplied with whatever information he desired; and he trusted a deaf ear would be turned to the many groundless rumours that had been circulated. As to the commissioners they had most thoroughly and satisfactorily performed their duties; and although the directors did not think it right to express their feelings upon this point in the report, yet, as Chairman, he had much pleasure in bearing his testimony to the great satisfaction they had given. (Hear, hear.) It was with the deepest regret they received the intelligence that Capt. Hill, one of the commissioners, had died on his homeward passage, as he had proved of the greatest service to the company. Having stated that he should be most happy to answer any question, or afford any information shareholders might desire, he concluded by moving that the report be received and adopted.

Mr. G. NOAKES, F.G.S. (managing director) had much pleasure in seconding the proposition. After the lucid and cautious remarks of their noble Chairman, he did not know that he had much to remark upon; but occupying the position he did, it might be expected of him to refer to one or two points. His lordship had adverted to the fact that the directors in their report had avoided expressing any views more sanguine than the circumstances of the mines fully admitted; but there had been phases, there had been periods, he must confess, in the history of this company when the directors themselves—at least, he spoke for himself—felt a degree of sanguinity which was more ardent than prudent. He believed, however, that from the first meeting he had endeavoured as much as possible to guard the shareholders from being led away by expecting too speedy results. He gave that as a caution, because he knew from experience the many contingencies that arose that could not be foreseen, even in miling in this country, to say nothing of miling in a primeval forest, and in a district where everything had to be created. He confessed he saw no cause whatever at this moment for any disappointment, save upon one point, and that was they had been led to expect large results in too short a time. He had no hesitation in saying that his confidence was as great as ever in the eventual results, and that when the whole of the plant was sufficiently extended the returns promised would be realised. (Hear, hear.) They had now been at work about 18 months; it was true that at the early stage of the company it was computed it would take 2½ years to bring the mines into an effective working condition, that it would take so much money for costs at the mines and so much for machinery, but there was a context which it was a pity had ever been made known; as, however, it was included in the computation the directors are bound to put it forward. He referred to the statement that during the above-mentioned period the returns from the mines would meet the costs. That raised their hopes with regard to the value of the mines, but, as his lordship had informed them, it was impossible to carry out that part of the estimate, inasmuch as the old native mills were in such a delapidated condition that it was impossible to bring them to bear, as the late lamented Capt. Francis had stated. If the shareholders had carefully perused the extracts of letters appended to the directors' report, they would see that an enormous amount of work had been done—indeed, he (Mr. Noakes) did not see, upon the whole, that there was any cause to despair. With his lordship's permission, he would state his opinion with regard to the immediate future of this company. The machinery was now, or ought to be, in such a position as to commence working as soon as there was ample water-power to turn it. In some of the letters it was stated the machinery was expected to be ready to go to work in March or April, and the only drawback, in his opinion, to that being accomplished was the possibility of there not being at that time a sufficient supply of water, for they had it in evidence that at the top of the valley water was scarce in dry seasons; but he (Mr. Noakes) fully relied upon the machinery now erected at the Consuelo and San Domingo Mines being in full working order, with ample water-power, in June or July next. The machinery was being erected a little below San Domingo, where there was sufficient water throughout the whole of the year for some part of the machinery. Eventually the plant would be continued to the bottom of the valley, where the company possessed the continuation of the Javall lode, and where Captain Paul contemplated erecting 86 arrastres, which, when at work, ought to yield something like 5000 to 6000 ozs. of gold per month, even taking the moderate computation that the yield would not be more than 1 oz. of gold to the ton of stuff. (Hear, hear.) They knew that in many parts of the mines the average yield of the ore was much higher, but he thought, to be safe, they ought not to expect more than 1 oz. per ton. If they could depend upon that, looking at the extent of the mines, he thought there was no doubt they had before them a most prosperous future. (Hear, hear.) He hoped those interested in the company had read the extracts which the directors had placed in their hands, inasmuch as thereby they were put in possession of all the directors themselves knew. There was no doubt there had been some little disorganisation at the mines, and, perhaps, some little faults in the administration of the company's affairs, but Capt. Paul could not be charged with any dereliction of duty, although there may have been some want of management—indeed, he believed the whole could be reduced to a want of administrative ability, but he (Mr. Noakes) believed that in Captain Paul they possessed a man of the greatest energy, and that it would be his utmost endeavour to realise the expectations he had held out to them. Shareholders would recollect that there had been already returned 2687 ozs. of gold, which had realised 8000l.; it was true more was expected, but that received had been an assistance. Although the present was not the meeting at which, according to the Articles of Association, an audited statement of accounts was submitted, yet it might be satisfactory to the shareholders to know the present financial position of the company, and the more especially as there had been circulated some unfounded rumours upon that point. At the present time the financial position of the company was as follows:—

Cash at bankers	£6265 11 3
Arrears of call	2126 11 6 — £ 8392 2 9
Liabilities—Bills payable	£3256 10 2
Financial position of the company April 30:—	
Cash at bankers	£6265 11 3
Arrears of call	2126 11 6
Cash on hand at the mines, on March 1..	4166 12 0
Deposit with the company's finance agent, Granada	3000 0 0 — £15,558 14 9
Liabilities—Bills payable	£3256 10 2
Estimated cost for February (say).....	2500 0 0
" " March	3000 0 0
" " April	3000 0 0 — £11,756 10 2
Balance in favour of the company	£ 3,802 4 7

(Hear, hear.) In other words, if everything were to be stopped at the present moment that would be the financial position of the company. Of course, he did not in this reckon the uncalled capital, nor need he state that it would be the endeavour of the directors to keep the expenses as low as possible. In all mining undertakings it was advisable to be prepared for the worst; and, therefore, although the shareholders might expect from the reports which had been circulated that the whole of the capital would be called up, he believed that would not be necessary. Although he could not pledge himself to that statement, yet such was his belief.

Mr. HILL enquired the meaning of the term arrastre?—Mr. NOAKES explained that it was a system of pulverisation by grinding, and somewhat resembled millstones.—The CHAIRMAN said that Captain Paul was strongly in favour of arrastres as against ordinary stamping for that character of ore, and no one could have a greater interest in making the property remunerative than Capt. Paul, for, apart from his large interest in the enterprise as a shareholder, his salary, in a great measure, depended upon it.

Mr. NOAKES mentioned that twelve heads of stamps had been ordered as an experiment. He had recently conversed with a gentleman, who had had 30 years' experience in gold mining, as to the best mode of pulverisation, and the result of that long experience was that the best mode to be adopted depended entirely upon the quality of the stuff, and Captain Paul was confident in his opinion that for the Chontales ores the arrastre was the best. That form was also adopted in South America, and at the Vallanzasca Mine, in Italy. It entirely depended upon the quality of the stuff. Captain Paul, referring to this question, states "that the machinery sent from England is of the proper description; and, although some of the heavy portions are not yet on the mines, when the next dry season sets in they will be brought into the mines, and be made available, as originally intended." In another place Capt. Paul states that "the arrastres, as made, are of the proper description, and will be the best the company can put up." Mr. E. COOKE enquired whether it had been suggested to send out an engine to be employed as an auxiliary power during the dry seasons of the year.—Mr. NOAKES said there had been some idea that the Consuelo Mine might be advantageously worked with a small steam-engine for stamps, but subsequently it was considered that by a system of tramways and pooling of the water, there would be ample power during the year to grind any amount of ores that could be raised.

The CHAIRMAN mentioned that the threatened revolution, which, happily, blew over, had the effect of depriving them for the time of their native labour;

but the commissioners had turned that to good account, for on the return of the natives they accepted a lower payment than they had before received.

A SHAREHOLDER asked if the company possessed any interest in the San Joaquin Mine?—The CHAIRMAN said that no arrangement had yet been made with regard to that mine, but a reference to the map would show that there was not the slightest doubt if the company could secure it for a reasonable sum, which would be of great advantage as regards the water-power.—Mr. J. H. MURCHISON enquired if the directors had yet been able to form an opinion as to whether the opening of the different lodes bore out the original anticipations of the value of the mines?—The CHAIRMAN said in some of the mines only sufficient work was done to prevent their forfeiture. He had already stated that a large portion of the mining operations consisted of dead work, but as far as the San Antonio Mine was concerned, that was really turning out much better than expected. Their commissioner, Mr. Truran, who had had considerable mining experience, did not see any reason whatever to doubt that the anticipations originally held out would be realised. Upon this point the commissioners stated that—"From all that has come under our notice, we can form no other conclusion but that, in due time we shall be able to send such returns of gold as will be the surest proof of the value of the mines, and confirm Capt. Paul's former statements. We have no anxiety as to the ultimate value of the company's mines, but time must be allowed for preliminary work such as we have, and for the erection of new machinery. In the meantime we will watch over the expenditure, and get the greatest amount of work at the least cost."

Mr. HILL asked if any specimens of the stuff had been forwarded to this country?—Mr. NOAKES said that Mr. Truran would bring specimens with him when he returned to this country. The question put by Mr. Murchison was a very pertinent one, as to whether the produce of the mines came up to that anticipated. In reply to that question, he might state that the mines had been only partially opened out, and so far as developed the average produce was over 1 oz. of gold per ton of stuff, but the average would, no doubt, increase as the development was extended. As to the Consuelo Mine, which created so much interest in the minds of the shareholders, that was now being worked east of the shaft, to the rear, the point, where in the upper level the rich "nail" was met with by the last report, the atle had been cleared out of the level, and they had driven 9 ft. into whole ground, in which the lode was found to be 5 ft. wide, and the whole of it producing an average of 5 ozs. of gold per ton of stuff. No doubt in many parts veins of rich produce would be found; but, as already stated, the average of the whole of the mines exceeded 1 oz. of gold per ton of stuff; and therefore, there was no doubt that from their extent the mines could not fail to be successful.

Mr. HILL asked if the point at which the rich "nail" was met with in the upper level had been reached in the deeper one?—Mr. NOAKES said that there were some 10 or 12 fathoms yet to drive before that point was reached.

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Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—J. Phillips, May 1: We are taking down the north lode in the 75 east, and find it to be 20 in. wide, and producing good saving work. **BEDFORD AUR.**—H. R. Harvey, May 1: The shaft is now sunk 7 fms. 5 ft. below the 77 yard level, the ground rather hard. The swallow has left the shaft, and is underlyng south-east; we shall have to drive a few feet to cut it again, that the water may run away from the shaft. It is not improbable that lead may be met with in this driving. The cross-cut north-west at the 79, near the junction of the Brynia and Milw lodes to cut the Coalta Waen, has been driven 18 feet, but the lode has not yet been intersected. Several branches have been met with in the cross-cut, and it may be that the lode is somewhat disordered. Jones's pitch in the back of the 77, north-east on the Coalta Waen, has improved since last reported on, and will now yield 15 cwt. of lead ore per fathom. There is no alteration to report in any other part of the mine.

BLACK CRAIG CONSOLS.—J. Smitham, April 27: The 54, driving east on Harriett's lode, is producing good lumps and stones of lead, and a great deal more blonde than it did; much water is coming out of the forebreast, which is producing from 6 to 7 cwt. of lead, and 20 cwt. of blonde per fm. The lode in the 54, driving east of No. 1 cross-cut, has improved for lead, with a promising appearance for a further improvement, and is producing from 6 to 7 cwt. of lead per fathom. In opening up the last branch we cut in No. 2 cross-cut, in the 54 west; it has greatly improved for lead; the men had a hole in it to day when I was underground, which produced a large quantity of lead. The three branches intersected in this cross-cut will yield fully 30 cwt. of lead per fm. The stope are still producing about 30 cwt. of lead per fm. Our prospects in the west end of the mine have greatly improved this week, and we may now be certain that the bunch of lead gone down in the bottom of the 43 continues to the 54 fathom level. We have 11 tons 13 cwt. of lead dressed and weighed into the house, and about 3 tons of lead on the dressing-floors. We have begun to dress the large pile of blonde and lead which you saw when you were here; this will take us three or four days, by which time the men in the stope will have succeeded in breaking a good pile of lead.

—J. Smitham, May 2: The lode in the 54, driving east of No. 1 cross-cut, on the new discovery, has improved a little for lead, and is now producing from 8 to 9 cwt. of lead per fm., with a promising appearance. We are drawing a splendid pile of lead from the stope to-day.

BOTTLE HILL.—J. Eddy, May 2: Friday last being our setting-day, the following bargains were let:—**Main Lode:** A stope west of Bucking-house cross-cut, in the back of the 24 fm. level, to four men, where the lode is about 4 ft. wide, and worth about 40 ft. per fathom. Also a pitch to four men in back of the 12 fm. level; tribute at 13s. 4d. in 17.—**South Lode:** The 24 fm. level to drive west by four men, at 4d. per fathom; the lode in the end is still small and poor. Also a pitch in the back of the 12 fm. level, to four men; tribute 13s. 4d. in 17.—**North Lode:** The lode in the trial shaft is about 3 ft. wide, and still producing some good work for tin. If all be well, I intend going to Truro to see the weight of our parcel of tin on Saturday next.

BRONFLOYD UNITED.—Thomas Kemp, May 1: Settings for May: The stope under the 52 to six men, at 70s. per fathom; lode worth 3½ tons of ore per fm. The stope west of winze in back of the 52 to four men, at 5½s. per fathom; lode producing 18 cwt. of ore per fathom. The stope east of ditto to six men, at 45s. per fathom; lode worth 12 cwt. of ore per fathom. The wheel-pit is completed, and we have commenced erecting the wheel.

BRYN GWYNNE.—H. Nottingham, April 30: The sump we have been sinking in the level going south from middle of incline, east of shaft, being hard and unproductive, I have suspended it, and put the set of men that were sinking the sump to drive on the lower level, south of incline; in this end we have easy ground for driving. The stonework men in the bottom level, south from middle of incline, are getting some fine lumps of ore from an east and west joint, which I hope will continue. The No. 3 level driving south, on east side of Field's, is without change. The tributaries are raising about the average quantity of ore, I think we shall have about 12 tons for the next sampling.

CAPE CORNWALL.—R. Pryor, W. White, May 1: The lode in the rise in the back of the 90 is worth 8t. per fathom. The lode in the stope east of rise is worth 9t. per fathom, and in the stope west of rise 4t. per fathom. The lode in the 70, west of shaft, is very much improved in appearance and character, and the end letting out more water.

CARADON CONSOLS.—S. Bennetts, April 30: The lode in the 90 west is not so wide as last reported, yet containing just as much ore. The 80 west to-day does not look quite so well as it has been. The stope are without much alteration. In the rise above the 54 the elvan has again nearly left it, and the ground become more favourable than for two or three weeks past, during which time the elvan has been wet and troublesome. We are now making the necessary preparations for pumping the water from the new shaft with the engine. Within the past week the water has so much increased as to render this necessary, in order to sink to any advantage.

CARDIGANSHIRE LEAD.—E. Pearce, May 2: **Glan Rheidiol Mine:** In the 40 fm. level cross-cut we are near the lode; the ground is much harder than usual, and a great quantity of water issuing from the end. Nothing done in other bargains for want of miners since my last report. The 30, east and west of shaft, also the winze below the 30, and a cross-cut at the 40, to intersect the south lode, shall be resumed as soon as I can get men for the different bargains. The dressing is going on regularly, and the machinery in good working order.

CLARA UNITED.—J. Davis, May 1: Settings for May: To stop and rise in the back of the 50 to four men, at 90s. per fathom. **Stope No. 3 (the 50)** to six men, at 70s. per fathom. The stope in back of the 40 to four men, at 70s. per fathom; these stope produce respectively 20, 30, and 20 cwt. of ore per fathom; lode worth 20 cwt. per fathom. I expect that the engine-shaft will be down the required depth for another level in about a fortnight from this date; the lode there continues to produce 30 cwt. of ore per fathom.

CROWAN AND WENDRON.—R. Reynolds, April 30: The engine-shaft is 10 ft. below the adit; the lode is about 2½ ft. wide, and although at present not rich for tin, yet it is a kindly-looking lode, and I have no doubt but what we shall find a good bunch of tin when we reach the junction.

CUDDRA.—A. Cundy, May 1: I have no alteration in our underground operations to report on since last week. We have hoisted the winze sinking below the 117 with a bore, and there is about 2 ft. of ground to complete, which will be done this week.

DALE.—R. Nines, April 29: The men are again at work in the 44 fm. level cross-cut, and the driving at this time is going on very satisfactorily. This morning we cut a large stream of water, which indicates we are approaching a strong vein. There is no alteration in the tribute ground.

—R. Nines, May 1: Having mentioned in my letter of Monday last I thought from the large quantity of water coming from the 44 fm. level cross-cut we are approaching a strong vein, which appears to be the case, although at present we have not been able to see much of it, as the water drove us before we could cut much into it; it is composed of spar, soft limestone, and clay, and has a most promising appearance. We are again lowering the water with our 7-in. lifts.

DEVON AND CORNWALL UNITED.—T. Neill, April 30: The lode in the 22, west of engine-shaft, is worth 2 tons of good ore per fathom. The lode in the rise in the back of this level is worth 5 tons of ore per fathom. The lode in the 34 west is worth from 2 to 3 tons of ore per fathom.

EAGLEBROOK.—Henry Tyack, April 27: The 30, on the north lode, going west, is now extended about 8 fathoms 3 feet. The lode in the present end, I am glad to say, looks exceedingly well; the bearing part of the vein is 18 inches wide, and containing rich yellow copper and lead ores; for this width we have broken solid lumps of copper from the end yesterday, and now on surface upwards of 100 lbs. weight. I beg here to remark that the lode for the whole distance driven is much more productive in the bottom of the level than in the back, and it is quite evident that there is a very fine lode of lead and copper going down below the 30. In the 30, east of cross-cut, from the shaft, the lode is 7 feet wide, containing clay-slate, quantities of light-coloured gossan, soft spar, and blonde, with small branches of lead and copper ores. The lode in this end contains everything that can be desired for lead, and from the quantity of water issuing from the end, I have every reason to believe that there is a good lode in advance of the end. Next week we intend employing additional hands on surface for the purpose of separating the ores, and preparing the same for the crushing-mill.

EAST BOTTLE HILL.—J. Eddy, May 2: We are continuing our driving and stoking in the 10, east of the western shaft; the lode continues large, now full 8 ft. wide, and producing rich work for tin.

EAST CARN BREA.—Capt. J. Richards (April 25) says:—“Although the lodes at the different points of trial are not rich, they still maintain very fair sizes, and the indications are very encouraging indeed, especially in the 80, east of Thomas's engine-shaft, where an improvement has already taken place. These good appearances, together with the very congenial and easy nature of the ground throughout the mine, are sufficient to warrant an opinion that we shall soon meet with some very good discoveries. Referring again to the pitwork at Thomas's engine-shaft, I would remark that as soon as it is made complete we hope to be able to keep the mine drained with one engine, thereby effecting a saving in our cost of at least 40t. per month. Our returns for the next two months will be about 220 tons of copper ore per month, and our cost for the same period will be (including extra for alterations in pitwork at Thomas's engine-shaft) about 900t. per month.”

EAST ROSEWARNE.—C. Glasson, May 2: The lode in King's shaft, sinking below the 95, is much the same as last reported, worth 6t. per fathom. In the 95, west of King's shaft, the lode is 20 in. wide, producing a little ore, but not enough to value. In the 95, east of King's shaft, the lode is small and poor at present; but I think this end will shortly improve, as the ground is getting softer for driving. In the 95, west of King's shaft, the lode will be taken down by the end of the week. The two stope in the back of the 95, east and west of King's shaft, are worth 6t. per fathom. The stope in the back of the 95, west of King's shaft, are worth 7t. per fathom. The stope in the bottom of the 75, west of Hallett's shaft, over the slide, is worth 7t. per fathom.

EAST SNAEFELL.—W. H. Rowe, May 1: The lode in the bottom of Glencherry shaft (now a little more than 14 fathoms below adit) is 6 ft. wide, carrying very regular walls, and composed of the most promising kind of quartz, but no ore as yet. In about a fortnight from this we shall commence to drive out the 15 a few fathoms southwards, but the utmost force will be directed northwards, where I think we ought to come up with the first shoot of ore about the middle or latter part of June. I do not intend to continue the present shaft below the 15, but as soon as possible transfer some of the men to the new shaft. The latter I have started as near the wheel-case as possible, so arranging it as by sinking vertically to intersect the lode at the 15 till we reach where there will be no necessity for pitwork. The new shaft is in a capital position for proving the ground under the main stream, where I have good reason to believe a large cross vein or slide intersects the Glencherry lode; moreover, in other respects, of an engineering character, I believe we shall never regret having started the new shaft. The water-wheel itself has been erected some time ago, and the “race” cut; also the boxes to convey the water to the wheel will shortly be fixed. I intend to send you an estimate of the cost of a simple drawing machine, which, now that we have the water-power, will be a saving to effect at once.

EAST SNAEFELL.—Special Report—J. Nancarrow, April 27: Agreeably with instructions which I have had from Mr. Curwen, of Liverpool, I beg to hand you my report of the same. The sett adjoins the Great Laxey and the North Laxey. The stratum is the clay-slate, and is of a metalliferous character. The lode now being laid open has a bearing of about 25° to the east of north, with a western underlie, on which a shaft has been sunk about 15 fms. In this shaft you have gone through a fine run of ore, and the lode is of such a character that it may

turn up good any day; in fact, I expect to hear of a bunch of ore in the shaft at any moment. The lode is large—from 3 to 4 ft. wide—and no doubt is one of the offshoots of the Great Laxey lodes, and more than probable the main part. The wheel you are now erecting will be of ample power to sink the mine to a good depth, and I believe you will in depth get on some very good ore, and, with energy and economy, you have a right to expect a good and lasting mine.

EAST ST. JUST UNITED.—R. Pryor, R. F. Goldsworthy, R. Wearne, May 1: Eastern Mine: Phillips's shaftmen having completed the fork at the 30, they will proceed to fix plunger-lift without delay. The lode in the 20, south from Phillips's, is worth 2t. 10s. per fathom. Western Mine: The lode in Savelle's engine-shaft, sinking below the 75, is worth 12t. per fathom. The lode in the 75, west of shaft, is worth 5t. per fathom. The stope in the back is worth 6t. per fathom. The lode in the 62 stope west is worth 4t. per fathom. Buck Lode: The lode in the 40, north from Reddipper shaft, is worth 3t. per fathom. The lode in the 10, north from West Buck shaft, is worth 8t. per fathom. The lode in the adit, north from West Buck shaft, is worth 8t. per fathom. The lode in the 29, south from Savelle's, is worth 3t. per fathom, and improving.

EAST WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, April 27: The men are getting on well with the sinking of the engine-shaft; the lode is 15 in. wide, with good stones of ore. The 95 east by four men, at 14s.; the lode is 18 in. wide, of quartz, &c., with occasional stones of ore. The 95 west to six men, at 10s. per fm.; the lode is 15 in. wide, and worth from 1 to 1½ ton of copper ore to the fathom. The stope above the 95 west by two men, at 45s. per fathom; lode worth 1½ ton of ore to the fathom. A winze to sink by four men, at 50s. per fm.; lode worth 2 tons to the fathom. A winze to sink below the 95 west by six men, at 110s. per fm.; the lode is small, but letting out a great deal of water, hence we think it ought to improve.

EAST WHEAL LOVELL.—Richard Quenlall, May 1: North Lode: The shaftmen are engaged taking down some ground in the eastern end of the shaft, below the 45, preparatory to fixing pitwork, where the lode is worth 20t. per fathom. The stope in back of the 45, west of new shaft, is worth 20t., and east it is worth from 15t. to 20t. per fathom. South Lode: The 40, driving west, is worth from 50t. to 60t. per fathom. The stope in bottom of the 40 is worth from 60t. to 70t. per fathom.

EAST WHEAL RUSSELL.—John Goldsworthy, April 30: In the 140 east the lode is from 4½ to 5 ft. wide, composed of capel, quartz, prian, mundic, and worth 20t. per fathom for copper ore, with a kindly appearance to further improve. The north or capel part of the lode contains a little tin in the furthest point; a little behind this point some good tin work has been obtained, with a good leader in the back. In the 140 fm. level cross-cut north (Ede's) the water is on the increase, which indicates the near approach of cutting the lode; the stratum is highly charged with mineral. No other change to notice.

—**Telephone.**—John Goldsworthy, April 30: The lode in the 140 fm. level east is looking promising to improve, worth 20t. per fathom.

—**Telephone.**—John Goldsworthy, May 1: The lode in the 140 fm. level east has fallen off in value, being worth only 1 ton, or 8t., per fathom. There is a temporary change.

—John Goldsworthy, May 1: Homersham's Shaft: In the 150 fathom level cross-cut north progress is being made, also in cutting trip-plate. In the 140 fathom level cross-cut, driving north (Ede's), fair progress is being made; the stratum is highly mineralised, with an increase of water, which indicates the lode being near. In the 140 east the lode is 5 feet wide, composed of capel, soft quartz, prian, mundic, and copper ore, worth 1 ton, or 8t., per fathom, a soft branch of quartz having crossed the lode from the south, which caused a falling off in the value of the lode, which we hope is only a temporary change. In the 120 fathom level cross-cut, driving north (Davey's), the ground is rather more spare for progress. There is no change in the tribute pitches; they are much the same as for some months past.

—John Goldsworthy, May 2: In the 140 east, the branch which came in to the lode from the south appears again to be leaving the lode, which is again showing a better appearance, therefore we hope to see an improvement shortly. There is no other change to notice.

FRANK MILLS.—J. P. Nicholls, J. Cornish, F. Cornish, May 1: The east lode in the 145 fm. level north is unproductive of lead ore to value; this end has been suspended to-day, and the men put to rise in the back, against the winze coming down from the 130 fm. level. The part of the lode being carried in said winze is yielding fully 1½ ton of lead ore per fm. The west lode, in the 130 north, has improved, now yielding 4 cwt. of lead ore per fm., and presenting strong indications of still greater improvement. The cross-cut west from the 130 north, on the east lode, is without any change worthy of remark; we expect, however, to communicate this with the end on the west lode in a few days, which will well ventilate both the north ends. We have driven a cross-cut west about 2 fms. from the 115 north, on east lode, which has proved the main or principal part to be standing by the side of level, fully 5 ft. wide at the point of intersection, and yielding good stones of lead ore, with every prospect of an early improvement. The 115 north, on west lode, is without change to notice. The men are now at work, and we expect to hole every day. There is still a good bunch of ore in the 130 south from cross-cut, now from engine-shaft, the lode has improved, now yielding saving work, and looking very kindly to still become better. The respective stope through the mine are yielding about the same quantity of ore as for some time past. The tribute department is also looking much the same.

FRIDSDON.—J. Collins, May 1: The east lode is again working well; the water is 7 fms. below the 21 fm. level. The men belonging to the rise in the back of the 21 east have not been able to do much in the rise back last week, the water being up in the 21 fm. level, and the air being very bad. The men are now at work, and we expect to hole every day. There is still a good bunch of ore in the 21 fm. level; lode worth 20 cwt. per fathom. I expect that the engine-shaft will be down to the required depth for another level in about a fortnight from this date; the lode there continues to produce 30 cwt. of ore per fathom.

GAWTON.—Capts. George Rowe, George Rowe, Jun. (April 30) say:—During the past four months the workings of the mine have been chiefly confined to sinking the engine-shaft below the 60, extending the 60 cross-cut to intersect the lode, driving the different levels on the course of the lode, and sinking winzes from the 50 to the 60, for the twofold purpose of thoroughly ventilating the workings and cutting out the ore ground already discovered in this part of the mine, in convenient sections for taking away with the greatest possible economy. The engine-shaft is sunk perpendicularly 12 ft. long and 6 ft. wide; 10 fm. 5 ft. below the 60, in a beautiful mineralised clay-slate. Meantime cutting and carrying down the necessary ground for the reception of a new plunger-lift in the proposed 72. The 60 cross-cut has been extended 3½ fms., through some hard capel, and the ore-bearing part of the lode intersected, on which levels have been driven on its course both east and west 10½ fms. The east driving from cross-cut is 5 fms. 0 ft. 6 in., and the west 5 fms. 1 ft. About 9 fathoms of this driving has, so far, opened up a valuable piece of ground, on a lode varying in size from 5 to 6 ft. wide, worth from 4 to 6 tons of ore per fathom. The western end still continues to look well, being worth 5 tons of ore per fathom. The last 6 or 8 ft. in the eastern end is not so productive, being worth 3 tons of ore per fm. A rise has been put up in the back of this level, and communicated with the winze sunk below the 50, invariably through a good lode, yielding from 4 tons to 7 tons of ore per fathom. We may also remark that it is very satisfactory to know that the ore in the 60 is of much better quality than in the level above. The 50 east has been extended 17 fms. 1 ft. 10 in. on the north part of the lode, and within 2 fms. of the perpendicular of the most extreme point of the 50, west from old sump. Moor's winze is down 7½ fms. below the 50, west of old sump, and a level driven west from the present bottom, on the south part of the lode, 6 fms. 4 ft., towards the 50 east from new mine, through a lode varying in size from 6 to 8 ft. wide, worth from 6 to 10 tons of ore per fathom. The 40 fm. level has been driven east and west from the 50, west from Moor's winze, and put up a rise in back of the 50 west, over the 50, west from Moor's winze, some 3 fms., for the purpose of proving the lode at that point, where we have met with some fine stones of ore, and the lode now going east is exceedingly kindly, worth 2 tons of ore per fathom. For the further prosecution of your property, under existing circumstances in the copper standard, and to develop the entire workings of the mine to a permanent and profitable investment, we would strongly recommend the principal pitwork points to be carried out in further opening up the mine for at least the next three or four months, without stopping away but little of the reserved ore ground, until the new and old mines are thoroughly communicated in the 50, which will occupy about four months from this time, after which the workings from the new mine will be available for drawing all the ores, &c., to surface at the new engine-shaft, when a considerable saving in manual and other labour will be effected. The most important points of operation are to continue the new engine-shaft to a 72 fm. level, and push the cross-cut towards the lode with all possible vigour. Drive the 60 both east and west on the course of the lode by full pairs of men;

NORTH POOL.—J. Vivian and Son, F. Clymo, May 2: We have taken down the lode in the sump sinking under the 24, on the middle lode. In the middle and eastern end of the shaft the lode is smaller, but in the western end it will produce yellow copper ore, worth about 15s. per fathom. From present appearances we are likely to have a good lode to commence driving the 40 west on. In sinking the winze under the 24, west of the sump, the lode continues north about 15s. per fathom, but we have so much water that it will be difficult to continue sinking it until the 40 has been driven towards it, and the water thus drawn from it. We look upon the increase of water in the winze as a favourable feature, indicating in all probability a larger and more valuable deposit of copper in depth. We shall now place the winze-men in the 40, west of the Ballarat shaft, on Ballarat lode, to drive towards the junction with the middle lode. In driving the 24, west of sump, on a south branch of the middle lode, the lode is 6 in. wide, containing muntic, blende, and copper. The appearances on the middle lode continue very promising, on the whole.

NORTH RETALLACK.—G. R. Odgers, May 1: The No. 2 lode in the shaft in the 90, east and west of the engine-shaft, is at present unproductive.

The lode in the 80, west of the engine-shaft, is worth 7s. per fathom. The winze sinking below the 70 west is worth 3s. per fathom. The stope above the 80 east is worth 6s. per fathom. The lode in the 80 west also looks better; it is 1 foot wide, and has a leader of copper ore, 3 in. wide. The lode in the 70 contains a great deal of muntic, and the end is very wet. There is no other change.

ROSEWARNE CONSOLS.—J. Nancarrow, R. Nucky, April 26: The 100 east is looking better, and there is a little ore coming into the bottom of the end. The stope above the 80 west is worth 3s. per fathom. The stope above the 80 east on Ballarat lode, to drive towards the junction with the middle lode. In driving the 24, west of sump, on a south branch of the middle lode, the lode is 6 in. wide, containing muntic, blende, and copper. The appearances on the middle lode continue very promising, on the whole.

NORTH WHEAL CHIVERTON.—W. Hancock, May 1: Old Sump Shaft: We have cut through the lode in the 80, or bottom level, 10 fathoms west of the shaft, and find it to be over 10 feet wide, composed of large quantities of quartz, muntic, gossan, and stones of rich silver-lead—beautiful looking lode. We have set three tribute pitches in the back of this level to six men; two at 7s. per ton for lead, and one at 8s. per ton; two men in each pitch. The cross-cut is commenced to drive south of Mew's shaft at this level, towards the new engine-shaft, by six men, ground very favourable; also the end west of shaft, by four men, on the north or lead-bearing part of the lode, which presents a promising appearance, producing stones of lead. I may here remark the lode in this place is 9 feet wide; there is still 35 fathoms more of the lode standing between both shafts, which we intend cutting through in a place or two more. In the 80 east the lode is also large, with strong spots of lead in it. About 2 fathoms behind this end we cut through the north part of the lode, and met with a nice branch or leader of lead; it looks as if, in going east a short distance, it will fall in with the south part.—New Engine-shaft: The ground is a little stiffer, but still favourable for a shaft of this size. We changed the broken pump in plunger-lift on Saturday last; the pitwork is now all in good trim. In the 54, west of cross-cut, on No. 2 lode, it is 2½ feet wide, producing 2 cwt. of lead per fm., and a little blende, ground easy. The tributaries in the back of the 43 west, on this lode, are getting wages; other places without any change. Everything is being pushed on with vigour in every department.

OKEL TOR.—J. Rodda, May 2: The ground in the 80 cross-cut south is moderately easy for driving, and of a favourable character for mineral. The two

stopes in the back of this level, on the north lode, are producing respectively 4 and 2½ tons of ore per fathom.

We have three stope in back of the 65 east on the average 3 tons of ore each per fathom, and one producing 2 tons

of ore per fathom.—South Lode: In the 65 east the lode is very large and ore; this level will no doubt go on to lay open a very valuable piece of ore ground;

as we are now approaching the shoot of ore seen in the level above. The lode in the 65 west is producing saving work, and is looking promising to improve.

In the winze at bottom of the 50 east the lode will yield 5 tons of ore per fm.

Williams's stope in the back of this level will yield 6 tons; and Hele's stope will

yield 4 tons of ore per fm.

OLD GUNNISLAKE.—H. Rickard, May 1: The ground by the side of the lode in the 48 east is a little stiffer for driving than it was last week. We are cross-cutting through the lode in the 48 west; in about 3 ft., and not yet through it, composed of gossan, spar, prian, muntic, with a little ore on a splendid-looking lode, one that augurs well for the future. The water has a little fallen off since the last report.

PENHALLE WHEEL VOR.—W. Chappell, W. H. Martin, May 2: At our pay

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four men, at 7.10s. per fathom. The 130, east of incline shaft, by six men, at 6.10s. per fathom. The 130, west of incline shaft, by six men, at 7.10s. per fathom. The 120, west of incline shaft, by four men, at 8.10s. per fathom. The water has a little abated in the mine.

ROCK-BOARING MACHINES.—We understand that one of Mr. Geo. Low's Patent Rock-Boaring Machines and Improved Air-Compressors will be tried in a few days, previous to shipment. They are fitted with all the most recent improvements, and will be tried against granite. We hope to publish full particulars in next week's Journal.

CHONTALES.—From the details of the general meeting (which appear in another column) it will be seen that the explanations given with regard to the position and prospects of the mines were received with the utmost satisfaction. Upon a close analysis of the extracts from the commissioners' letters it will be found that a uniform opinion is expressed—that the mines themselves, as far as their productiveness is concerned, are all that has been stated of them, and that it is only a question of time to get the machinery in a position for making returns. Looking at the extent of these mines, and the capabilities they possess, the returns themselves can only be limited by the extent of plant the company erects. This position possesses another advantage—for should the lode in any one particular mine temporarily decline, in others, in all probability, an improvement would take place. From all the data adduced, but one conclusion can be come to—that when the appliances adequate for the working of these mines are in full working order, large returns must unquestionably be made.

GOLD MINING IN ITALY.—The directors of the Pestarena United Gold Mining Company have received the following telegram:—“1300 ozs. of gold remitted to office. Machinery working well, and the field increasing.” This is the first remittance of the amalgamated companies, and is fully equal to all anticipations. As far as can be ascertained, it is the result of not more than five weeks' operations.

ROYAL COPPER MINES OF COBRE.—From the details of the meeting (which appear in another column) it will be seen that the accounts are even more favourable than was anticipated in last week's Journal. The liabilities are now only 19,600*l.*, whereas in January they amounted to 33,000*l.*—in fact, even better by 11,000*l.*—an asset in Cuba to that amount having been taken into account in January, but omitted in the present statement. So that, after paying the balance, the mines will be clear of all debts, and the entire property, plant, machinery, &c. (the original cost of which, as stated in the accounts, was upwards of 5000*l.*) An enquiry was made at the meeting if those who wished to withdraw from the company could do so; the reply was that there were parties who would take the shares, and put them in responsible names, if the present holders paid up the call of 37.10s., and 17.10s. per share in addition.

DYNGWY MINES.—After the repeated efforts which, from time to time, have been made by a section of the shareholders of this company—even through our columns—to arouse the executive, and to ensure a measure of reform in the management of this undertaking, we are glad to learn that, at last, active measures are being taken, in conjunction, to hold a special meeting on requisition, which will bring facts of importance before the proprietary. We trust, for the good of the cause we specially advocate, that the result of this combination may lead to the speedy restoration of this valuable property in public estimation.

RAILWAYS AND COAL FIELDS IN NATAL.—Are engaging the attention of gentlemen at present in London, but some of whom have been for many years in the colony. On Wednesday a meeting was held in the rooms of the London and Natal Bank, for the purpose of considering what steps should be taken by way of raising funds for preliminary expenses, which must of necessity be incurred by making exhaustive surveys of the coal fields and of routes for railways. Dr. MANN, who was present on the occasion, gave some very interesting and important information relative to the general geology of the country, and of its physical geography and agricultural resources. He asserted that the coal was, without doubt, one of the true Carboniferous period, and quite equal to at least the average quality of British coal. This subject was somewhat fully referred to in the Journal of April 20.

COAL MARKET.—Only 71 fresh ships came forward this week, principally screw steamers. Business in all descriptions of coal has been fairly active, and the prices quote an advance of 3*d.* to 6*d.* upon this day week, a clearance being effected. Hetton Wallsend, 19*s.* 6*d.*; Haswell Wallsend, 19*s.*; Heugh Hall Wallsend, 17*s.*; Gosforth Wallsend, 16*s.* 6*d.*; Tunstall Wallsend, 16*s.* 6*d.*; 55 ships at sea.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (May 3) write—“We are pleased at being able to report a much improved feeling in all our articles. It is not so much that quotations show any great advance as that buyers have become plentiful, and holders are not disposed to make selling quotations. There has been an active demand during the week for most descriptions. The very cheap parcels of tough and best seem to have been taken off the market, and we close firm at our quotations. Australian sorts have advanced about 17. per ton. A large business has been done in Chile bars at from 71*l.* to 71*l.* 10*s.* per ton, closing rather buyers at the latter figure. Good ore and regular still commands 14*s.* 3*d.* per unit.”

RATING OF MINES.—On Wednesday, in the House of Commons, Mr. P. Wyndham nominated the following as the Select Committee on the Mines Assessment Bill:—Lord George Cavendish, Mr. Villiers, Mr. Percy Wyndham, Mr. Slater-Booth, Mr. Knatchbull-Hugessen, Mr. Henderson, Mr. Kendall, Mr. St. Aubyn, Mr. Colville, Mr. Read, Mr. Liddell, Lord Eustace Cecil, Mr. Leeman, Mr. Beach, and Mr. Kekewich. Five to be a quorum. The Committee met yesterday (Friday) afternoon, *pro forma*, in order to select a Chairman. Their choice fell upon the Hon. Percy Wyndham, member for West Cumberland.

SOUTH FOWEY CONSOLS.—Advices received at the London offices of the company announce continual applications for shares by parties residing in the neighbourhood who know this property and entertain a high opinion of its prospects, situation, and advantages. A prospectus will duly appear in the Journal, as well as circulated to the public, who are invited to make early notification of their desire to secure an interest therein. This company is formed under the rules and regulations of the Cost-book System, which allows shareholders to terminate their liability at any time by giving due notice of such intention, thereby avoiding the pains, penalties, and cumbrous and protracted processes of the Joint-Stock Companies' Limited Liability Act.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

PENHALLE WHEAL VOR.—It now appears that the efforts of the persevering shareholders in this mine are to be well remunerated for their outlay. The important improvements which have already taken place in driving the 26 east and 33 west ends, on the north south lode, are fully bearing out the predictions of the agents; and great interest is attached to cutting the Penhalle lode in the cross-cut south at the 74, where there is every probability of a rich course of tin being met with. I am also informed there is a cross-cut north at the 84, to cut the main part of Parkwarrah lode, in very congenial ground; and should a good lode be intersected, the mine will quickly become a dividend-paying one.

ROSE AND CHIVERTON UNITED.—This property is attracting much notice. Capt. Trease thinks that from the halvans alone they will be able to get 1000*l.* per annum profit for the next 14 years.

EAST SNAEFELL.—Captain James Nancarrow, of Shrewsbury, has lately inspected this mine. He states “that the lode is, no doubt, one of the offshoots of the Great Laxey lode, and more than probable the male part.” He further states that he had not seen in the island a lode that he liked better than that at East Snaefell, and that with proper management it will certainly become a good mine.

We are informed that Captain JOHN ROBERTS, late of the Brazils, will leave Liverpool early in this month for the gold mines of East Canada and the Chaudières Valley. Any letters addressed to him will be attended to—care of T. Glover, Esq., Quebec.

EAST WHEAL ROSE.—Good progress continues to be made, and the lode is improving as it gets under the hill. The most satisfactory results are anticipated from the further development of this property.

M. R. JOHN HOSKING, MINING ENGINEER,
(Late of Ashburton, Devon).

Mr. HOSKING, having had 20 years' practical experience, OFFERS HIS SERVICES AS MINE SURVEYOR, VALUER OF MINING MACHINERY, &c. &c. TO INSPECT ANY MINING PROPERTY, either at home or abroad. Terms on application.—14, Liverpool-street, London, E.C.

M. R. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE THEREON.

Mining, Railway, and other Shares bought, sold, or exchanged. Shares for sale in mines and quarries that will pay 15 to 20 per cent. per annum.

Offices, 5, Finsbury-street, London E.C.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 3, 1867.

COPPER.	£	s.	d.	£	s.	d.	IRON.	Per ton.
Best selected...p. ton	82	0	0	—	—	—	Bars Welsh, in London	6 10 0
Tough cake and tile	80	0	0	—	—	—	Ditto, to arrive	6 10 0
Sheathing & sheets	82	0	0	82	0	0	Nail rods	7 0 8 0 0
Bolts	84	0	0	—	—	—	Staffd. in London	7 10 0 8 10 0
Bottoms	88	0	0	—	—	—	Bars ditto	7 10 0 9 10 0
Old (Exchange)	70	0	0	—	—	—	Hoops ditto	8 12 6 9 12 6
Burra Burra	82	0	0	—	—	—	Sheets, single	9 10 0 11 0 0
Wire	—	—	—	0 0	0	11 1/2	Pig No. 1, in Wales	4 5 0 4 10 0
Tubes	—	—	—	0 0	0	0	Refined metal, ditto	4 0 5 0 0 0
	—	—	—	0 0	0	0	Brass, common ditto	5 15 0 6 0 0
	—	—	—	—	—	—	Do, mire, Tyneor Tees	6 10 0
	—	—	—	—	—	—	Do, railway, in Wales	15 0 6 0 0
	—	—	—	84 1/2 d.	9 1/2 d.	—	Do, Swed. in London	10 7 6 0
	—	—	—	10 1/2 d.	—	—	To arrive	10 0 0
	—	—	—	—	—	—	Do, No. 2, in Clyde	2 14 0 3 5 0
	—	—	—	—	7 d.	—	Do, 1 <i>l.</i> Tyne or Tees	9 6 0
	—	—	—	—	—	—	Do, 1 <i>l.</i> f.o.b. do.	2 6 6 2 7 0
	—	—	—	—	—	—	Do, Nos. 3, 4, f.o.b. do.	11 0 0 12 0 0
	—	—	—	—	—	—	Railway chairs	5 10 0
	—	—	—	—	—	—	Do, spikes	11 0 0 12 0 0
	—	—	—	—	—	—	Indian Charcoal Pigs, in London p. ton.	7 0 0 7 10 0
	—	—	—	—	—	—	STEEL.	Per ton.
	—	—	—	—	—	—	Swed., in kegs (rolled)	14 0 5 14 10 0
	—	—	—	—	—	—	Do, (hammered)	15 0 14 10 0
	—	—	—	—	—	—	Do, in taggots	16 0 0
	—	—	—	—	—	—	English, spring	17 0 0 23 0 0
	—	—	—	—	—	—	QUICKSILVER (p. bottle)	6 17 0 0
	—	—	—	—	—	—	LEAD.	Per ton.
	—	—	—	—	—	—	English Pig, com.	19 17 6 0
	—	—	—	—	—	—	Ditto, LB.	20 0 20 5 0
	—	—	—	—	—	—	Ditto, WB	22 5 0
	—	—	—	—	—	—	Ditto, ordinary soft	20 0 20 10 0
	—	—	—	—	—	—	Ditto, sheet	20 15 0
	—	—	—	—	—	—	Ditto, red lead	20 15 0
	—	—	—	—	—	—	Ditto, white	27 0 0 30 0 0
	—	—	—	—	—	—	Ditto, patent shot	23 0 0
	—	—	—	—	—	—	Spanish	19 10 0 19 15 0

* At the works, 1*s.* to 1*s.* 6*d.* per box less.

+ A Derbyshire quotation: not generally known in the London market.

REMARKS.—We are glad to be able to report a rather improved feeling in the Metal Market, resulting from the more encouraging hope that peace will be preserved between the two powers of France and Prussia, and that this summer will not again see the Continent of Europe plunged into war, alike ruinous to the nations engaged in it, and prejudicial to the commerce of the whole world. It seems to be now confirmed that a Conference has been agreed to by the powers principally concerned in the Luxembourg question, and that the Conference is to meet in London on the 7th inst. This is very satisfactory, and will be the means, we trust, of bringing this vexed question to a satisfactory conclusion, and of preventing a recourse to war, which would be so deplorable. The consequence of this agreement has been that a more encouraging aspect is given to commercial operations generally, in which the metal market fully participates, and it is earnestly to be hoped that the result of the conference will be such that one great cause of the gloom which has impended over trade lately will be removed, and that with the prospect of continued peace before us we shall have a return of commercial prosperity. Although it can hardly be said that during the past week business has been very much better, yet there appears to be a more cheerful tone pervading the market, with every expectation that we shall soon see the dawn of a greatly improved state of things, and that we shall have a considerable revival in the metal trade to encourage us after the long period of dullness and inactivity.

COPPER.—We have it from most reliable authority that about 300 copper mines in Devon and Cornwall are now stopped working, and that from 3000 to 4000 of the miners, all being able-bodied, and the most skilled and active of the mining population, with their wives and families, have emigrated; also that our imports of copper ore are most likely to fall very considerably below the average. These circumstances will have a tendency very much to strengthen the market; and, notwithstanding the endeavours of some interested parties to run down the market and cause a depreciation in the value of the article, we feel convinced that we shall soon see a much better state of things arising, and prices rise from their present very low position to something that will be far more remunerative to the trade generally. There is less disposition at present to effect sales at the low prices which have been lately ruling, and many holders decline to sell, except in very small quantities.

IRON.—In Staffordshire the works, as usual, have been slack at this period, but still there are more orders in hand than there have been for some time, and the trade is now looking decidedly more healthy. In Welsh also little has been done at the works lately. The American orders have decreased a little, but there is still a tolerably good business doing with the States, and advices from New York are rather encouraging as to future requirements. On South American account there is only a limited enquiry. As might be expected, the continental demand has been checked by the rumours of war between France and Prussia, and should such a calamity occur the European markets would be but small customers for iron. The improved feeling as regards Eastern transactions is maintained, and there is a probability that additional contracts will be forthcoming from that quarter before long. The home demand is quiet. In Swedish Iron a good business is still doing, and the demand continues very active. In Scotch Pig-iron the market has assumed a more cheerful appearance, a fair amount of business has been done, and the price has advanced to 52*s.* cash, and 52*s.* 3*d.* one month, at which the market is steady.

LEAD.—A fair business is still doing, and prices remain firm at the quotations. Spanish pig has advanced to 19*s.* 10*s.* to 19*s.* 15*s.*

TIN.—The market for foreign has rather improved during the week, the hope of a peaceful termination of the Luxembourg question having had a favourable influence. Prices have become more steady, and business has been done in Straits at 84*s.* 10*s.* cash, and 85*s.* prompt one month. Banca in Holland is now quoted at 52*s.* f.s., at which there are buyers. The stock in Holland on warrants, on April 30, was 164,356 slabs, against 147,268 slabs same time last year, and the arrivals towards next sale were 35,948 slabs, against 69,840 slabs same time last year.

SPELTER.—In Staffordshire the works, as usual, have been slack at this period, but still there are more orders in hand than there have been for some time, and the trade is now looking decidedly more healthy. In Welsh also little has been done at the works lately.

The American orders have decreased a little, but there is still a tolerably good business doing with the States, and advices from New York are rather encouraging as to future requirements. On South American account there is only a limited enquiry. As might be expected, the continental demand has been checked by the rumours of war between France and Prussia, and should such a calamity occur the European markets would be but small customers for iron. The improved feeling as regards Eastern transactions is maintained, and there is a probability that additional contracts will be forthcoming from that quarter before long. The home demand is quiet. In Swedish Iron a good business is still doing, and the demand continues very active. In Scotch Pig-iron the market has assumed a more cheerful appearance, a fair amount of business has

For this reason chiefly our mining shares are still very quiet, holders not being inclined to make concessions for the purpose of inducing business, and intending buyers seeing no reason to hasten on transactions. Mining Company of Ireland shares have more than any others been affected by these circumstances, enquiries and offers at slight reductions having been numerous, without finding sellers under last week's closing prices of 16*l.* each (7*l.* paid), the result being that we have no dealings in them to quote this week. Wicklow Copper (2*l.* 10*s.* paid) being much heavier, shares were more flexible, and after fluctuating between 22*l.* 15*s.*, last week's price, and 22*l.* 10*s.*, have finally changed hands at 22*l.* 6*s.*, leaving off in request at this figure. Carysforts are gaining strength in the dealers' confidence, they having been taken at an advance of 6*d.* in our quotation of the 13th inst. of 5*s.* General Mining Company for Ireland shares have been firm, and changed hands at their recent rise to 2*l.* 15*s.* Connorree shares have been a trifle weaker, having been sold at 6*d.* or a drop of 6*d.* per share.

THE GREAT CHIVERTON CONSOLS SILVER-LEAD MINING COMPANY (the prospectus of which appears in another column) is in course of formation for extending the development of a proved valuable mineral property, situated immediately to the south of Cargill and Old East Wheal Rose. It was successfully worked some years since, and considerable returns of silver-made, but disputes with the owners of adjoining properties caused a cessation of operations, and the company went into Chancery, which prevented the further development of the mine. Its capabilities are attested by several leading practical authorities, and among others Capt. John Kitto who has recently inspected the mine on behalf of the directors) gives it as his opinion that he considers the large quantity of ore raised from the shallow workings to be a sufficient guarantee that the result will be very satisfactory, and has no hesitation in recommending it as a speculation of more than ordinary promise. The capital is placed at 15,000*l.*, and divided into 3000 shares. The company is to pay 6000*l.* for the property (including the work done), of which amount the vendors agree to take 4000*l.* in shares. A considerable proportion of the capital has already been subscribed.

At Hingston Down Consols Mine meeting, on Tuesday, an account of expenditure and receipts, showing a cash balance of 52*l.* 5*s.* 10*d.*, and an estimated account of payments and receipts before the meeting to be held in Aug., showing an estimated credit balance of 97*l.* 4*s.* 5*d.*, were laid before the meeting. The cost for the ensuing four months is estimated at 700*l.* per month, and the next sale of ore will be about 400 tons.

At Wheal Rose meeting, after a discussion relative to an application made by the Great North Downs adventurers for this mine to contribute to the working expenses of their western engine, it was resolved that the Wheal Rose adventurers should pay them 2*l.* per month, which shall terminate when the manager of the mine (Capt. Tremayne) thinks desirable. Capt. Tremayne and Truran say—"At River shaft but little has been done for the last two months in consequence of the great increase of water, which has at times completely flooded this part of the mine. The water at this point and throughout the mine for the last fortnight has been gradually decreasing, and we are happy to say we have resumed sinking this shaft below the 90, the lode in which is 6 ft. wide, and worth 2*l.* per fm. In a winze sinking about 10 fms. west of this shaft the 90 is 6 ft. wide, composed principally of capel and copper ore, and is worth 3*l.* per fm."

At Ganton Copper Mine meeting, on Wednesday (Mr. E. Hunt in the chair), the accounts showed a debit balance of 47*l.* 1*s.* 5*d.* A call of 5*s.* per ton was made, to pay off the book debt, and the loss on the coming four months extra work at surface requisite for increased sampling. The agent's report will be found in another column. The adventurers resolved not to stop or work on tribute the reserve ground till the lode was cut at the 70 fm. level; the cross-cut would on Saturday be set to drive at that level. With the exception of a few fathoms the whole of the ground would be standing from the 40 down to the 70 fm. level, and the lode would average 30 feet wide.

At Wheal Edward meeting, on Thursday (Mr. R. M'Call in the chair), the accounts showed a debit balance of 23*l.* 9*s.* 4*d.* The adventurers feeling disposed to pay further call, resolutions were passed to suspend operations; to sell the machinery and materials by public auction in one lot, as far as practicable; not to register any further transfers; and a special meeting was appointed for May 17, to confirm the resolutions or otherwise.

At the New Trelawney Mine meeting, on Thursday (Dr. Power in the chair), the report of the directors and balance-sheet were received and adopted. Details in another column.

At the Yudanamutana Copper Mining Company of Australia meeting, on Tuesday (Mr. H. Hill in the chair), the report of the directors and balance-sheet were received and adopted. Details in another column.

At the Carmarthen Mines Company meeting the dividend for 1866 was fixed at 2*l.* 1*s.* of which 1*s.* were distributed on account in November last. The balance of 1*s.* per share, less 2*l.* c., the French tax, will be paid on May 1.

The Dronfield Silkstone Coal Company is being formed, for the purpose of coal mines and other minerals, including, in the first instance, the quarrying from Mr. James Addy and Mr. Frederick Ward, of Coal Aston, Derby, masters of certain mines in Dronfield, Derby, and the machinery, plant, brick-kilns, stone-getters, &c. The promoters are—Messrs. James Addy, Coal Aston, Derby; Frederick Ward, Park House, Sheffield; Wm. Wake, Drynforth House, Sheffield; J. C. Colver, Fir House, Sheffield; W. Batt, Cemetery-roads, Sheffield; J. C. Colver, Fir View, Sheffield.

On the Stock Exchange an increased amount of business has been transacted in Mining Shares during the week. The following prices were officially recorded in British Mining Shares:—Chiverton, 6*s.*; East Lovell, 9*s.* 9*d.*; North Wheal Crofty, 4*s.* 5*d.*; East Caradon, 5*s.*; East Carn Brea, 2*s.*; Great Wheal Vor, 17*s.* 18*s.* 18*d.*; Prince of Wales, 2*s.*; East Bassett, 19*s.*; Great Laxey, 18*s.* In Colonial and Foreign Mining Shares the prices were:—Cape 7*s.*; Scottish Australia, 1*s.*; Chontales, 2*s.* 2*s.* 2*d.*; Don Pedro North del Rey, 1*s.* 1*s.* 1*d.*; United Mexican, 2*s.* 2*s.* 2*d.*; Anglo-Brazilian 16*s.* 1*s.* 1*d.*; St. John del Rey, 55*s.* 55*s.*; Pestarena, 2*s.* 2*s.*

GEOLICAL SOCIETY OF LONDON.—April 17: Sir Charles Lyell in the chair. John Francis Walker, of Sidney-Sussex College, Cambridge, was elected a Fellow. The following communication was read:—*On the Physical Structure of North Devon, and on the Palaeontological Value of the Devonian Fossils*, by Robert Etheridge, F.R.S., F.G.S., Palaeontologist of the Geological Survey of Great Britain. The Lower, Middle, and Upper groups of sandstones and shales of West Somerset and North Devon were described in this paper as occurring in a regular and unbroken succession from the south—from the sandstones comprising the promontory of the Foreland, the base, to the grits and shales, &c., overlying the Upper Old Red Sandstone, Pickwell Down to the south. The author was unable to see any traces of a fit of sufficient magnitude to invert the order of succession, or that would be the rocks of the Foreland at Lynton to be upon the same horizon as those of a line of high ground that passes across the county from Morte Bay on the west to Wivelcombe on the east. The Foreland grits and sandstones are thin by the Lower, or Lynton, shales, and form a group equal in time to the over Old Red Sandstone of other districts, but deposited under purely marine conditions. The author then showed that above the Lower, or Lynton, shales, there is an extensively developed series of red, claret-coloured, and grey grits, 1500 to 1800 ft. thick; these form a natural and conformable base to the Middle Devonian, or Ulfracombe, group. The highest beds, containing Myalina Natica, insensibly pass into the gritty and calcareous shales of Combeham, Ulfracombe, &c. This Middle group Mr. Etheridge unhesitatingly regarded as the equivalent of the Torquay and Newton Bushel series of South Devon. Etheridge gave detailed tables of the organic remains of the two groups, Lower, or Lynton, and the Middle, or Ulfracombe, and collated them with species found in equivalent strata in Rhine, Prussia, Belgium, and France. He inclined to believe that these two marine fossiliferous groups represent the unfossiliferous Old Red Sandstone (Bingley beds) of Kerry, and the Gaird and Killarney grits of the south-west of Ireland. The author then endeavoured to prove that the Pickwell Down beds are the true Upper Old Red sandstone not the whole of the formation, as was lately proposed. Arguments were also brought forward to show the probability of the Carboniferous (in part) and Coomhola grits being the equivalent of the English Upper Old Red Sandstone, or Upper Devonian, and that the North Devon beds only are to be regarded as the true type, to which the Irish may be compared, and not vice versa. Physical and Palaeontological evidence distinctly proves the author's conclusion that the whole of the slates and limestones of Lee, Ulfracombe, and Combeham underlie the Morte Bay Red Sandstones. The author compared the whole Devonian Fauna of Britain with that of the Rhine, Belgium, and France, means of a series of tables based upon the British types. These marine Devonian species were compared with those of the Old Red Sandstone proper, the Lower, and Carboniferous, and analyses were made of all the classes, orders, genera, and species, with relation to the group of rocks in which they occur—the being the conclusion that the marine Devonian series, as a whole, constitutes an important and definite system.

Wednesday the following papers will be read:—*On a new specimen of Eozoon*, by Dr. J. W. Dawson; with an introduction by Sir W. E. Logan.—2. *On Suberial Denudation, and on Cliff and Estuarine Chalk and Tertiaries*, by W. Whitaker, B.A., F.G.S.

MANCHESTER GEOLOGICAL SOCIETY.—At the monthly meeting on Friday (Mr. Binney, the President, in the chair), the Chairman read a letter from Messrs. H. Lees, Brothers, Victoria Mills, Droylsden, respecting the discussion that had taken place at a previous meeting of the Society on the extinction of coal mines. Messrs. Lees suggested the use of steam.—Mr. Dickinson had known instances where steam had been applied for that purpose, and in certain circumstances it was successful.—Mr. Knowles said that where he had got well hold of coal, steam was not of much use.—The Chairman said that the whole of the extinguishing fire of many years' standing.—Dickinson called attention to Mr. Jukes's new arrangement of the Devonian

As in all societies where a member took an independent view, the Geological Society of London had refused to print Mr. Jukes's paper, but Mr. Jukes, nevertheless, circulated it himself, and the opinion of the Society was divided on the subject. Mr. Jukes placed the rocks of Devonshire between the

mountain limestone and the coal measures. He (Mr. Dickinson) had examined the rocks to which Mr. Jukes alluded, particularly those which bore coal in the neighbourhood of Bideford, and judging by their crystalline structure and general character, he had always thought they had not been properly classified, and that their real position was now the mountain limestone and between it and the rocks that were apparently lower in Cornwall. Although there was a slight difference between his view and Mr. Jukes's, he was glad that Mr. Jukes had taken an independent position.—The Chairman said he believed Mr. Jukes had placed those rocks under the mountain limestone.—Mr. Dickinson said that if that was so he concurred with him.—The Chairman remarked that similar rocks in Fifeshire were being divided.—Mr. Aitken presented to the society some specimens from the fish beds at Lyme Regis in the newly classified rhaetic rocks, which were supposed to be passage beds between the trias and the lias. Specimens were also shown from Ludlow and Norton.—The Chairman and Mr. Hull acknowledged the difficulty there had always been to learn where the trias ended and the lias began.—Mr. Plant said he thought that the rhaetic rocks might be taken as the dividing point between the two.—A paper was read by Mr. Williamson with the view of describing the geological features of the country between Parahita and Minas das Caxeira, in Brazil, where he was recently engaged with an expedition that was sent in search of gold. The distance between the two places named was about 300 miles, and the general outlines of the country were shown by a very fine sectional map.—Mr. Plant said the map corresponded closely in its main features to the map laid down by Agassiz.—The paper did not lead to any discussion.

SOCIETY OF ENGINEERS.—On Monday evening, a paper will be read on "Water-Tube Boilers," by Mr. Vaughan Pendred.

Contract for Coals for Her Majesty's Dockyards, &c.

CONTRACT DEPARTMENT, ADMIRALTY, SOMERSET HOUSE.

 **THE COMMISSIONERS for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, do hereby give notice that, on Tuesday, the 14th May next, at Two o'clock, they will be READY to TREAT with such persons as may be willing to CONTRACT for SUPPLYING Her Majesty's Dockyards, Victualling Yards, Naval Hospitals, Greenwich Hospital, Royal Marine Barracks and Infirmarys, and the Admiralty, Marine, and Coast-guard Offices in London with**

COALS.

A form of the tender, with a distribution of the coals and conditions of contract, may be obtained at the above Department, Admiralty, Somerset House. No tender will be received after Two o'clock on the day of treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Coals," and must also be delivered at the Department of the Storekeeper-General, Admiralty, Somerset House, accompanied by a letter signed by two responsible persons, engaging to become bound with the person tendering in the sum of £20 per 100 tons for the due performance of the contract.

By order,
ANTONIO BRADY,
Registrar of Contracts and Public Securities.

Contract Department, Admiralty, Somerset House, April 27, 1867.

MINING SECRETARY WANTED.—To a COMPETENT PERSON having a CONNECTION with the INVESTING PUBLIC, a liberal salary and other inducements will be offered.—For further particulars, address "C. S.," 77, Gower-street, Bedford-square West.

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WANTED, a PRACTICAL MANAGER to SUPERINTEND the WORKING of COLLIERIES in SOUTH WALES.—Applications, with testimonials, to be addressed to "X. Y. Z.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

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Address, A. WATERS, Carmarthen.

CHINA CLAY AND STONE.—LANDS to be LEASED at moderate dues.—For particulars, apply to Mr. W. D. KING, solicitor, Carmelford.

TO BE SOLD, with or without the Minerals, FRON HALL, near MOLD, with about SIXTY-EIGHT ACRES of FREEHOLD LAND.

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FOR SALE, BY PRIVATE CONTRACT, SEVERAL MINERAL ESTATES, from 100 to 300 acres, of PLUMBAGO and GOLD, in EAST and WEST CANADA; also MINERAL and AGRICULTURAL ESTATES in the North and South of the UNITED STATES of AMERICA. Will be sold to pay a high percentage on capital. Moderate expenses of investigation guaranteed to a bona fide purchaser. Merchandise, railway supplies, engineering apparatus disposed of for cash. A satisfactory agency to any manufacturing house through a firm in New York.

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STATE, with SLATE QUARRY, on the BANGOR RANGE, FOR SALE, near a shipping port.—For further particulars, apply to Messrs. BELL and ROBERTSON, Engineers and Surveyors, Trinity-place, Charing Cross, London.

SLATE QUARRY FOR SALE.—A FREEHOLD ESTATE, of about SIXTY-FOUR ACRES of Arable and Pasture LAND, in the county of DEVON, with a SLATE QUARRY thereon, yielding a large monthly return of SLATE, commanding the best prices in the market, and capable of greatly extended development. The property is OFFERED FOR SALE, in consequence of the means of the proprietors being inadequate to the outlay desirable for its full working.—For particulars, apply to J. F. WILLIAMS, Esq., No. 10, Queen's-square, Bloomsbury, London.

It is inclined to believe that these two marine fossiliferous groups represent the unfossiliferous Old Red Sandstone (Bingley beds) of Kerry, and the Gaird and Killarney grits of the south-west of Ireland. The author then endeavoured to prove that the Pickwell Down beds are the true Upper Old Red sandstone not the whole of the formation, as was lately proposed. Arguments were also brought forward to show the probability of the Carboniferous (in part) and Coomhola grits being the equivalent of the English Upper Old Red Sandstone, or Upper Devonian, and that the North Devon beds only are to be regarded as the true type, to which the Irish may be compared, and not vice versa. Physical and Palaeontological evidence distinctly proves the author's conclusion that the whole of the slates and limestones of Lee, Ulfracombe, and Combeham underlie the Morte Bay Red Sandstones. The author compared the whole Devonian Fauna of Britain with that of the Rhine, Belgium, and France, means of a series of tables based upon the British types. These marine Devonian species were compared with those of the Old Red Sandstone proper, the Lower, and Carboniferous, and analyses were made of all the classes, orders, genera, and species, with relation to the group of rocks in which they occur—the being the conclusion that the marine Devonian series, as a whole, constitutes an important and definite system.

Wednesday the following papers will be read:—*On a new specimen of Eozoon*, by Dr. J. W. Dawson; with an introduction by Sir W. E. Logan.—2. *On Suberial Denudation, and on Cliff and Estuarine Chalk and Tertiaries*, by W. Whitaker, B.A., F.G.S.

MANCHESTER GEOLOGICAL SOCIETY.—At the monthly meeting on Friday (Mr. Binney, the President, in the chair), the Chairman read a letter from Messrs. H. Lees, Brothers, Victoria Mills, Droylsden, respecting the discussion that had taken place at a previous meeting of the Society on the extinction of coal mines. Messrs. Lees suggested the use of steam.—Mr. Dickinson had known instances where steam had been applied for that purpose, and in certain circumstances it was successful.—Mr. Knowles said that where he had got well hold of coal, steam was not of much use.—The Chairman said that the whole of the extinguishing fire of many years' standing.—Dickinson called attention to Mr. Jukes's new arrangement of the Devonian

As in all societies where a member took an independent view, the Geological Society of London had refused to print Mr. Jukes's paper, but Mr. Jukes, nevertheless, circulated it himself, and the opinion of the Society was divided on the subject. Mr. Jukes placed the rocks of Devonshire between the

COPPER AND COPPER ORES

Sold at LIVERPOOL, from April 15 to April 29.

Messrs. Pitcairn-Campbell and Co. (April 30) write—Lower prices have again been accepted for Bar Copper, at which, however, a large business has been done, both the home trade and exporters having been large buyers. English copper continues most depressed, second hand parcels being forced off at very low prices. It is to be hoped that some revival may be looked for upon the more reassuring accounts from the Continent, and also upon the continued advice of shorter charters from the West Coast. The imports of copper material into Liverpool and Swansea in the first quarter of 1867 have been from all quarters—11,880 tons ore, 8128 tons regulus, 154 tons Barilla, and 5340 tons slab—total weight of fine copper 12,065 tons; against the corresponding period in 1866 of 16,700 tons ore, 6662 tons regulus, 281 tons Barilla, and 2143 tons slab—total weight of fine copper 8003 tons, showing an increase of 4062 tons. In the corresponding periods of 1865 and 1864 the imports were 9314 tons and 9802 tons of copper severally. Quotations are 70*l.* 10*s.* for bars, 78*l.* for ingots, 14*l.* 3*d.* for Chilli ores and regulus, and 16*l.* 3*d.* for Barilla. The sales since our last have been—

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WATSON AND CUELL'S MINING CIRCULAR

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON AND CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special sports and remarks upon mines and mining, and the state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to "recommend" mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

PRIVATE CIRCULARS.—If we refer to this matter again it is against our wish, and has been forced upon us. We do not object, and have no right to object, to the honest expression of opinions, whether they should happen to be adverse to our interests or otherwise. But we do object to falsehoods when they are pointed at ourselves, and to slanderous and libellous insinuations against honest agents. One of the remarks in the circular we denounced was—"As the mine (Prince of Wales) will, doubtless, be worked for the London market, sinking will, probably, be a disastrous operation, as it will entail an extra cost of some 40/- per month." This was not a fair expression of opinion, but a gross libel upon the management and Captain Gifford. But there is now another Richmond in the field. We trod unconsciously upon the corns of East Chilerton, and the advertiser who appears so wrathful about it last week in reality ought to be thankful to us, for it has given him a good opportunity for—well, we suppose we must not say puffing! Our remarks related solely to a recommendation of shares which had proved injudicious. We said nothing whatever about the prospects of the mine, or which the advertiser goes out of his way to say "we know nothing." We wish we did not. Perhaps, however, we know quite as much about the mine as the advertiser. We do not want, however, to enter into its merits or demerits in this place. It may be a good speculation, and we dare say it is, for those who like it; but everybody knows that the one ground at Wheal and West Chilerton dips west, towards Chilerton Moor; and, therefore, the parallel attempted to be drawn between the latter mine and East Chilerton is not quite judicious to one who is averse to puffing. But to return to the writer of the "private circular." He says that East Chilerton cannot lay claim to the "mysterious rich lode of West Wheal Metal." We wonder what in the world this is meant for! Can it be that it was intended to remind the public how we acted in West Metal, and how the writer of the circular and others, who claimed the "mysterious lode," have not acted in West Vor? At any rate, it will be strange indeed if through the seeming oblivion of facts shown by the writer it shall now come to the knowledge of some unfortunate shareholder what has become of the money subscribed for that same mysterious lode in West Vor? The readers of the Journal will not have forgotten the correspondence on that subject some few years ago. Upon the report of Capt. C. Thomas, that the rich Metal lode of Wheal Vor ran through the seat of West Metal, we introduced it to the public, and raised 50,000/- to work it. Soon after this, certain parties in the market bought for a small sum a very small sett, which they called West Vor, and said they had the rich Metal lode, which was not in our West Metal at all, and that Capt. Charles Thomas was altogether in the wrong. There were several agents to say that it went through West Metal, and several to give their opinion that it passed through West Vor, and the end of it was (so far as we were concerned), we publicly stated, that as we had introduced West Metal to the public solely upon the merits of Metal lode of Wheal Vor, and there seemed to be a difference of opinion, and at least a doubt about it, we should pay all the costs incurred ourselves, and return the 50,000/- subscribed in full to the shareholders. This we did, and in doing it we stated that as the West Vor promoters were issuing 40,000 shares at an enormous premium, upon the faith also of the rich Metal lode, we left upon at least the moral obligation to return the money they received, should they not succeed in proving the lode. Now, it is somewhat singular that the writer of the "private circular," who referred to the matter last week in such an extraordinary manner, was one of the advocates of West Vor, in direct opposition to us; and in his circulars at the time strongly recommended the shares at 3/- each. And will the writer allow us to say now, that we know of no more interesting matter with which he could fill his next circular than the answers to the following questions:—1. Has the rich Metal lode ever been proved in West Vor?—2. Is it true that company has been wound-up?—3. Have those who paid 3/- per share for West Vor on the strength of the rich Metal lode received back their money intact, as those in West Metal did?

PRINCE OF WALES—"A. B."—We hope next week to give the exact distances of the 45 and 55 west from the cross-courses in Prince of Wales. These cross-courses, we have no doubt, make the ore, but as the lodes come in contact with them, they are generally disordered for a few feet on either side; and should the ends fall off as they near the cross-courses, of course advantage will be taken of it to knock down the shares if possible. The 45 west has been for some time through the first cross-course, and is worth 60/- per fm. The 55, worth 70/- per fathom, is a long way behind the 45, and not up to the first cross-course.

CHONTALES—"R. L."—Next week.

CHEMICALLY PURE SILVER.—Mr. Gutzkow presented to the California Academy of National Sciences a sheet of chemically pure silver, three feet in diameter, about three ounces in weight, and as thin as fine paper. The colour was beautifully white, and the texture like fine lace. This silver was obtained by mixing solutions of protosulphate of iron and sulphate of silver in a large dish, when the silver rose to the surface and there formed into a sheet. Successive sheets will rise with each stripping. This easy mode of obtaining chemically pure silver is of much practical value.

LEAD SMELTING WORKS IN GREECE.—Mr. Erskine, the British Minister at Athens, reports the successful operations of a French company, which has established large lead smelting works in the district of Laurium, not far from Cape Sunium. The company employs upwards of 500 workmen, chiefly natives, and a large and thriving village has sprung up where recently was a desert. It is the only enterprise of the kind in Greece. The neighbourhood abounds in beds of scoria, or slag, from which the ancient Athenians extracted all the silver and lead they could by the comparatively unskillful methods of their day. About 2 per cent. of silver still remains in the lead, which is sent to Newcastle to be refined. But the existence of any portion of the precious metal has so excited the cupidity of all classes, that there is a cry for getting rid of the company by means of high export duties, and a foreign speculation is treated as necessarily injurious to native interests. About 10,000 tons of lead are produced in the year; and when the beds shall be exhausted it is thought the mines from which the ancients derived their ore may be worked, and possibly a field of wealth practically inexhaustible may be opened to Greek industry.

THE IRON-SAND OF NEW ZEALAND.—The company formed last year for the utilisation of the iron-sand of New Zealand has delayed its operations pending negotiations with the Provincial Government, in connection with the official report of Dr. Noad, professor of metallurgical chemistry, St. George's Hospital, on the success of the process of smelting patented by the company. The report of Dr. Noad being highly satisfactory, operations are to be at once commenced, as announced by a further prospectus, just issued. Mr. Jordan, late agent-general for Queensland, has been appointed managing director, intending almost immediately to proceed to New Zealand; the manager of the works to follow with the plant.

AUSTRALIAN NEWS.—Messrs. S. W. Silver and Co. report that at Victoria business was more active. Another gold field discovered about 18 miles from Dandenong. Six ships had sailed since the 28th ult., with 83,015 ozs. of gold. Total amount of gold exported this year, 257,834 ozs., of which 27,157 ozs. were from New Zealand. These figures, compared with those of last year, show an increase of upwards of 30 per cent. A small but beautiful diamond found at Young's Creek; the second diamond found here. A vein of coal, 2 to 3 ft. thick, had been struck on the River Latrobe, near Sale. At New South Wales commercial affairs were improving. There had been 500 ozs. of gold washed out at Forbes during one week in January. The quantity of coal exported from Newcastle, N.S.W., during 1866, was 645,615 tons, showing an increase of 183,613 tons upon 1865. At South Australia trade was improving, consequent upon the abundant harvest. The railways were working night and day in conveying wheat to the port for shipment for the London and Liverpool markets.

THE GOLD FIELDS AT VICTORIA.—A new gold field has been discovered about 18 or 19 miles from Dandenong, near the Emerald. The sinking is about 18 ft. deep. Good yields are reported from the various centres of mining industry, but no gold field seems able to compete with Ballarat in this respect. The last quarterly report of the Avoncliff Company showed that the yield of gold for the half-year had been 2587 ozs., out of which 4500/- had been paid in dividends. The quarterly report of the Bonshaw Company shows receipts 14,120/-, 3300/- paid in dividends, with a credit balance of 789/-, and that since commencing operations 15,147/- has been paid in dividends. The Working Miners' Company paid 9600/- in dividends last quarter. A nugget weighing 17 ozs. 5 dwt. has been found in the workings of the Lady Don Company. On Feb. 18 the Great Western Company bottomed on one of the richest prospects of wash-dirt which has been found in the district for some years. A sample of the earth was shown about, and it is said that it could not be broken in any way without gold being seen in the fracture.—*Argus Supplement*.

NOTICES TO CORRESPONDENTS.

** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

SIR.—Will some reader kindly favour me with the address of the acting secretary of the San Juan Silver Reduction Company, situated in Hillario, province of San Juan, Argentine Confederation?—C.

TRUMPET CONSOLS.—Will some one connected inform me how it is that Trumpet Consols, which I hear is paying dividends of 10s. per quarter, is not in the list of British Dividend Mines, as its omission is calculated to mislead the uninformed, it being understood that all mines not named in that list do not pay dividends?—A. M.

GREAT MORLWYN SLATE QUARRY.—I have long sought in vain through the Journal for some particulars respecting this company, about which I am particularly anxious for information. There was a meeting held in January, but from that day to this I have heard nothing of the proceedings of the company, though it was going to be re-organised, and the capital increased. I have written twice to the manager, and have not even had an acknowledgment of my letters, which, to say the least, has a bad omen about it, and it makes one almost fear there is something that is best kept secret.—W. C.

MINERAL RIGHTS ASSOCIATION (LIMITED).—I notice in last week's Journal an enquiry from "One Interested," as to the truth of this company purchasing shares in speculative gold mines. My surprise at the shares of this association being offered at 4s. 6d. is considerably lessened on hearing of such rumours. I became a subscriber for these shares on the clear understanding that they had in view the purchase of a most valuable property in Nicaragua. That proving a failure, was it not the duty of the directors to have called the shareholders together for their opinion as to further proceedings, which they have not done? We were then told of another fruitless errand to California, and we have now the "pleasing" intelligence of hearing our money is being invested in the most speculative of all shares—gold mines. Surely, we have all seen enough of the ruin entailed on the public by such investments. There should not be a moment lost in winding-up and dividing the assets of this company, the shares being all but unsaleable; yet we ought, from the high rate of interest during the period the money has been in the hands of the directors, to have a return of it at least at par, or 20s. per share.—A SHAREHOLDER.

CALLS AND ASSETS.—I much wish that some of your correspondents would answer the following question:—Can a call be legally made to pay mine expenses when a sum larger than the call will produce is at the command of the management of the mine? I ask this because a mine in which I have shares (Gonamena) has made a call when the accounts show 700/- of good assets, arising from former calls not paid, and which, therefore, being good, as they say, the managers might obtain if they chose. But instead of this they make a fresh call. Is this fair? Is it legal?—ONE WHO PAYS.

STRAY PARK, AND ITS MANAGEMENT.—I have been a shareholder in this mine many years. I find on referring to the Journal of April 20 that the shares are advertised for sale at 15s. each, but on the following week are quoted 5/- to 7/- each, or an advance of (say) 600 per cent. in seven days. This looks well, and I presume the cause is (from reading the quarterly report last week received from the mine) the great improvement at the deepest point reached. If we may take Dolcoath as an index to this property, we must soon see these shares at a much higher figure than they have yet hitherto reached. I find no fault with the management at the mine, nor do I wish greatly to increase the work of any one of the agents, but would suggest to them the time is now arrived when the non-resident shareholders are entitled to hear a little more often how their property is progressing than they have been yet in the habit of doing: for my part I never by any chance hear but once quarterly, when I get a report, accompanied just as regularly by a heavy call; but having faith in the old ship, I have always paid, and hoped on, as I believe we are now on the eve of great improvements. If the agents were to pay a few lines weekly or fortnightly, to be inserted in the *Mining Journal*, I am sure the little trouble given would greatly oblige many others besides the writer, whose shares in this mine have cost him already more than 50/- each.—A SHAREHOLDER.

ENCUMBERED ESTATES COURT (IRELAND).—Erratum in line 11, paragraph 5, of my letter on Encumbered Estates Courts (Ireland). Your usually careful reader has overlooked the omission of the word *not*, by which the sense of the subject is lost—in fact, the whole gist of the argument destroyed. The omission, however, is so palpable that the careful reader will at once supply the little monosyllable; nevertheless, it may be as well to intimate a correction of the oversight.—G. HENWOOD : 69, Tritonville Avenue, Sandymount, Dublin.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, MAY 4, 1867.

THE IRON USED IN CHAIN CABLES.

We readily find space for a letter which appears in another column from a respectable chain cable manufacturer in South Staffordshire, for the question here involved is not only one of national importance, but it is likewise one of great interest, as affecting the professional fame of ironmasters and others who are engaged in the production of the means upon which our mercantile navy chiefly depends for its safety. It was, therefore, with the best intentions that the Legislature of 1864 passed the Chain Cables and Anchors Act—an Act for regulating "The Proving and Sale of Chain Cables and Anchors." It was passed, as stated in the preamble, because it was conceived "essential for the better security of lives and property afloat on sea-going ships to make provision for the proper testing of chain cables and anchors." In accordance with the requirements of this Act, all chain cables since made have had to be tested by certain machinery approved by the Board of Trade, but it is a fact that since the Act has come into operation accidents at sea by the snapping of cables have been much more frequent than previously. Upon this point Mr. J. S. LAURIE, a well-known shipowner of Glasgow, writes as follows to the Secretary of the Board of Trade, under date March 16 this year:—"I am certain that I under-state the facts when I say that for one case before the passing of the Act in which the cables were broken in the riding of the ships, there have been ten such accidents since the Act came into operation." And Messrs. LAMPERT and HOLT, of Liverpool, writing from that port on Feb. 4, informed the Board of Trade that since the month of November, 1865, "no fewer than seven cases of the breaking of new and duly certified chain-cables in use on board steam-vessels, of which they were the owners, had occurred." In all these cases the certificates were such as would comply with the requirements of the Board of Trade surveyors. The last of the cases referred to by Messrs. LAMPERT and HOLT was that of the screw-steamer, Donati, which happened in the Mersey on Feb. 8. This steamer was supplied with two cables, of 150 fms. each, of 19-16th in. chain. Both cables broke successively, almost immediately after the anchors were dropped, and while there was but little strain upon them. One of the cables had never been used before, the other had been used only once before. Enclosing their communications to the Board of Trade embodying these facts, Messrs. LAMPERT and HOLT write—"We may be forgiven for adding that so many cases of broken chains have not occurred to us in our previous 20 years' experience as shipowners."

These communications were quoted by Mr. ROBERT GALLOWAY, C.E., Chief Surveyor of Steamships, and Examiner of Engineers, and Inspector of Proving Establishments, Apparatus, and Machinery, in a paper which that gentleman read on the operation of the Act, at a meeting of the Society of Arts, on April 10. Mr. GALLOWAY, to the surprise even of certain shipowners themselves, stated that it should be unmistakably understood that at present the Board of Trade license was only a guarantee that the machine could do a certain amount of work. It was no guarantee at all that it would be required to do so, or that cables tested by it would be tested to the strain required by the Act; or, indeed, would be tested to any given strain. The Act did not ensure an independent test, makers themselves who possessed a licensed machine being empowered to issue certificates. But if the machines should be independent, as at Birkenhead or at Low Walker, still the only test required by statute was a "tensile" strain; in other words, a direct pull of a certain power, varying with the size of the chain. Thus, it will be seen that the test, as now applied, is applied upon the false assumption that strength and thickness are convertible terms, or, in other words, that iron of a uniformly good and high quality is used in the manufacture of all cables. The strain imposed by the Act designed that merchant cables should be brought up to the proportionate strength of navy cables. Previously to the adoption of legislative measures, chains were sold to bear navy test on the one hand, and on the other, merchant test. The merchant test was considerably below the navy test; and the Legislature, in their simplicity, imagined that all they had to do to secure the navy test was to require a certain size of iron, to

bear a certain test, without at all supposing that any other test of quality was necessary. In this way they provided a proof effectual enough, if the iron, when of the same size, would have been of the same quality as the navy cable iron. They omitted altogether, in their calculations, the fact that the custom of the dockyards is to examine the quality of the iron during the process of the manufacture of the cable, whereby the material is perfectly examined, leaving the workmanship alone to be tested by a "tensile" strain.

For such iron as will bear their test the navy authorities pay a fair price, for their test implies a chain capable of bearing a strain some 30 or 40 per cent. over that to which in process of proving it is submitted. The navy price, however, all shipowners are not prepared to pay, now that they know what is the test which will enable them to insure their ship and cargo. That test, however, is, thanks to the vigilance of LLOYD'S, somewhat superior to the private test. The committee, observing the practically inoperative character of the Act, resolved that they would insure no vessels the cables and anchors of which had not been tested at machines under the constant supervision of their own agents. LLOYD'S test refer only to the tensile strength of the chain; and if a cable has been fairly tested at a private machine, it will bear LLOYD'S public test. That test obtained, the owner can insure his vessel. But the extent to which a desire merely to be able to effect the assurance prevails with many shipowners is seen by the circumstance that when asking for the price at which a chain can be supplied to them by the makers, they ask for a quotation for an article that will bear the Government test. Other shipowners, misinterpreting the nature of the test, took the same course in asking for a price to be named. Competition in business does the rest. A few experiments on the part alike of ironmasters and cable-makers soon showed how the Government test might be met at the lowest possible cost. So clever are they, that they can bring their products up to close upon the test without breaking in the machine, but so close that after it has been heartbroken the ship he alluded to sailed in May last for Calcutta. She first of all parted one chain in Calcutta, then she came back, and anchored in the Downs, where she parted the second. Here were two cables which had gone through the very best machine, yet they both parted on the very first voyage. Whose fault this was may be inferred from Mr. BEASLEY's statement, that shipowners, when they had a contract, sent round for the lowest tenders, and the manufacturers went in for the lowest quality of iron that would bear the strain. That Mr. BEASLEY was himself of the number who sought such a tender may be gathered from his honest admission that "in his simplicity he had always thought that when he had a cable which had passed the Admiralty test it would be capable of bearing any strain which was likely to come upon it." Now, what was the quality of the cable which this desire for a low-priced article secured? Let it be understood that the Admiralty test for the cables, of which Mr. BEASLEY complained, is 59 tons. Mr. BEASLEY, upon enquiring at the Birkenhead testing machine, found that whilst the first cable was being proved the first link broke in the iron at 58 tons 15 cwt. Here we see that the ironmasters and cable makers together were clever enough to bring the article up to within 5 cwt. of the test. The next link broke at 58 tons 14 cwt., again in the solid; the third at 57 tons 15 cwt., also in the iron; and the fourth at 58 tons 5 cwt., this time in the weld; so that in only one of the four breakages was the weakness of the chain found to exist in the construction of it. In the second cable the joint producers of it showed a closer approximation to the requirements of the Act, for that chain broke at exactly 59 tons. But notwithstanding these inherent defects, the broken links were supplied with good ones at the Birkenhead Works, and the cables having then stood the test were sent to sea. But what were they now? The iron had been tried beyond the limits of elasticity, the cables were ruined, and, in the words of Mr. GALLOWAY, applied to the testing of chains of a poor quality, it was rendered "poor weak thing, ready to part on any sudden stress or strain being applied."

Again we ask, whose fault is that? Let those gentlemen reply who are now buying cables in Liverpool at 10s. 6d. per cwt. Now, the lowest price at which iron can be got to bear the Government test is 6s. 3d. per cwt.; let to this be added 2d. for cutting up and blast, wages for making 1s. 3d., waste 9d., delivery free on board 7d., commission 4d., shackles 3d., proving by private machine 2d., public test 1s., and profit 6d., here we have 11s. 3d., even with wages at 1s. 3d., instead of, as they have been up to this Saturday evening, when notice will expire for a reduction of 2d. per cwt., at 1s. 5d. per cwt. Although, however, a cable cannot be turned out with any chance of bearing the test, and with a profit of 6d. per cwt., at less than 11s. 3d., shipowners are buying cables at this day at 10s. 6d. Mr. BETTERLEY, who made the largest anchor in the world, which has just been supplied to the Great Eastern, remarked during the discussion on Mr. GALLOWAY's paper, that "there were many clever swindlers than the man HOULDSWORTH, who bored a hole in his vessel; many a clever scoundrel would prefer to buy a cheap cable, which did the business quite as well as the auger." It is clear, however, from the admission of so respectable a man as Mr. BEASLEY, that shipowners, of quite a different class to those so pungently described by Mr. BETTERLEY, are those who encourage this cheap work.

What is the remedy for this state of things? Mr. WIGRAM, the Chairman of the meeting at which Mr. GALLOWAY's paper was read, furnishes it in few words. He said that his own experience of anchors and chains was that there was not the least difficulty in getting sound and good ones by any ship

of 1865 there were 733 locomotives in operation on the Indian lines, 80 having been brought into use in 1865. Of the 733 engines, 328 belonged to the East Indian and 143 to the Great Indian Peninsula. At the close of 1865 contracts were pending for 418 more engines, of which 215 were for the East Indian and 140 for the Great Indian Peninsula. The estimated outlay required to complete the guaranteed system of Indian lines is 81,000,000/., of which about 65,000,000/ has already been raised. As showing the immense importance of cheap coal to the Indian lines, we may state that the working expenses of the Great Indian Peninsula Railway amounted in 1865 to 59.08 per cent. of the receipts, an average of 41s. 3d. per ton having been paid for coal imported from England. On the other hand, the East Indian Railway, which obtains coal from collieries at Burdwan, Raneegunge, and Kurhurbarlee, reduced its working expenses in 1865 to 45.7 per cent. of the receipts.

THE IRON SHIPS OF THE BRITISH NAVY.

In the remarkable case of CLARE and the British Admiralty, to which public attention has not unfrequently been directed during several years past, and which was again recently mooted in the House of Commons, we have no favour to one party more than the other, and wish to manifest none, unless something of a desire to befriend the oppressed, as oppressed, rather than the oppressors, as oppressors should be so construed. We desire most sincerely to adhere strictly to the plain truth; and all we wish is that our readers should be made acquainted with its precise merits, and that objectors or remitters to the course of justice may at once learn that, at all events, the subject before us is one which deserves further investigation on the part of every enquirer anxious to accept the good, without caring whence it comes, and to reject the evil in the same way. In objective science there is not the same ground or shadow of a foundation for opposing fair enquiry which captious minds may find for disliking more airy excursions into the far-off distant regions of metaphysical or speculative philosophy. In the science of naval architecture truth and error must obviously act with striking antagonism on searching enquiry. One will and must, of necessity, utterly extinguish the other. Errors in practical shipbuilding, in their very nature, cannot but have a limited existence. By allowing free discussion, and their consequent free development, we ensure their removal; by suppressing both we prolong their unworthy adoption and temporary triumph, and thus improperly cherish a vital energy in falsehood, which its own morbid growth could neither have supplied nor encouraged.

The extreme reluctance so often evinced by the British Government to avail themselves of the scientific discoveries of men of genius may, perhaps, find its most appropriate antithesis in the very facile eagerness with which it occasionally adopts others, of scarcely less significance in point of national interest and widely extended importance, breaking down, however ruthlessly, all opposing barriers, patent and non-patent, legitimate or illegitimate, orthodox or heretical, and with the accommodating eyes of true diplomatic discernment, seeing no need of recognising or rewarding the distinguished authors of these great works. Engineering talent and mechanical skill must not be sensible of honourable distinction or pecuniary emolument. In the exemplification or justification of these remarks we need but refer in passing, *inter alia*, to the well nigh insuperable obstacles which impeded the world-renowned skill, and its official employment, in the case of Sir ISAMBARD BRUNEL, more particularly in reference to his matured plans for making ship-blocks by machinery, albeit to its ultimate adoption, after Government neglect, is the British nation indebted for one of the most extensive engineering establishments in Europe, and in which an amount of science and skill has been combined, and applied to mechanical invention and improvement, scarcely equalled, certainly not surpassed, by any other throughout the habitable globe.

The unhappy history of the gifted sons of Science is too painfully familiar to render it necessary for us to recapitulate here the triumphant way in which brilliant inventions and marvellous problems have tided over every difficulty, and been successfully carried out, despite the official sarcasms and imbecile sneers with which these mighty projects for Humanity's weal have been uniformly assailed and obstructed. The so-called delusion of yesterday has become the faith of to-day, and that which our predecessors have mocked at, and laughed to scorn, seems to us as necessary as the air we breathe. Meanwhile, the delusion of each inventor has either been wantonly seized, as too advantageous to be missed, or gratuitously repudiated as mean and contemptible. Whatever the issue, the crowning achievement has fallen to the lot of few indeed in the way of recompense, during their lives, even though their names be already identified with a mechanical revolution as stupendous and durable as those which have shed a halo of undying fame around the glorious memories of WATT and STEPHENSON, men of science, whose labours have been devoted to the public good with an ability and zeal almost superhuman—exertions now rendered imperishable by the fruit of toil, and results so splendid as well as vast.

We have before us an elaborate document of no inconsiderable importance, setting forth with much perspicuity and rational argument the scientific claims of Mr. CLARE upon the British Admiralty for the use of his patents and plans in iron shipbuilding, in addition to the arduous trials and discouragements he has for so many years undergone at their hands; and still, be it understood, the unrequited registered patentee of inventions long adopted and made use of by the British Government. There seems to be no reasonable doubt—judging from the temperate statements of the pamphlet in question—that this talented engineer has devoted a prodigious amount of labour and a long life, not to mention large sums of money, to the furtherance of nautical science, and that he has really succeeded in elucidating the confessedly best modes of constructing iron-clads; in fact, the whole gist of the matter, according to the admission of his opponents themselves, appears to resolve itself into a question of accuracy of date, no doubt existing as to the important scientific improvements Mr. CLARE has, from time to time, effected in the modern system of naval architecture, naval design, practical iron shipbuilding, and steam navigation. The question of date is readily disposed of when it is remembered that the beautiful models exhibited by this gentleman at the Liverpool Exchange, so long ago as Dec. 22, 1853, anticipate by a period of six years the construction by the Admiralty of the vessels called the *Warrior*, *Black Prince*, *Resistance*, and others, in which the Letters Patent granted to Mr. CLARE are held to be infringed; in short, these very ships are regarded by him as affording alike the illustrations and the violations of his scientific principles and patented plans.

It would not be possible for a moment that we could believe Lord Justice COCKBURN would thus have directed the jury in a verdict for the Crown in the case of CLARE v. THE QUEEN, had he been fully cognisant of the undoubted facts which have subsequently transpired in a late re-hearing of the chief subject in dispute before Mr. ARNOLD, at the Westminster Police Court. Emphatically has the most damaging evidence of the two principal witnesses—Sir CHARLES FOX and Mr. SCOTT RUSSELL—been amply confuted by testimony equally unbiased as theirs, adequate *counter evidence* of a nature not to be successfully impeached, and given in a straightforward impartial manner by men of acknowledged reputation and skill in their several departments of the naval and shipbuilding profession. For example, the *Albion*, it is well known, was not built by the former gentleman, but by Mr. MORRISON, of Liverpool; and the ship called Her Majesty, it is no less certain, is not constructed on the identical principles invented by Mr. CLARE, and reproduced in the *Warrior*, as erroneously declared by Mr. SCOTT RUSSELL, and so on to the end of his melancholy chapter, which should, therefore, be at once amended and revised.

We think that in common justice to our future British Inventors, as well as to those of the past, of which number Mr. CLARE seems likely to prove a remarkable, but we trust not permanently, unfortunate instance, further investigations of his just claims should be made forthwith, and his far from unnatural complaint attended to by the properly constituted authorities, in order that true merit, whether found in the service of the British Admiralty or elsewhere, should not be allowed to perish for ever, unrecognised and unrewarded in this, the 19th century of the Christian era, and that not even the semblance of an odious disloyalty, or ghostly shadow of disrepute should be suffered to attach to the royal fiat, already issued

by Her Most Gracious MAJESTY—in itself a resolution sufficient to demonstrate to any official hierarchy, however upstart or tyrannical, that the present is neither the age nor the country suitable for an execrable display of despotic injustice, but which is calculated to undo the wrong already perpetrated, and to prevent its direful repetition, ingenuous, concise, laconic, yet sublime, “*Let right be done to Mr. CLARE*” in the matter of Iron Shipbuilding.

THE FACTORY ACTS EXTENSION BILL, AND THE IRON TRADE.

We record in another column the fact that an influential deputation from the Iron and Tin-Plate Traders waited upon Mr. WALPOLE, on Monday, to protest against the extension of the Factory Acts to the iron trade. A similar deputation from another section has also taken the same step. Although, no doubt, the extension of the Factory Acts to the Potteries might be productive of good results, the peculiar nature of many portions of the iron trade would render such a course productive of a far larger amount of inconvenience to the masters, and loss to the parents and children, than any advantages that could possibly be gained. The same remark applies with equal force to mining. One point, so far as the public is concerned, should not be so completely ignored in the discussions on this topic. Legislative restrictions were, no doubt, loudly called for in the case of factories. In the manufacture of textile fabrics children were formerly employed at a very tender age. That is not the case in the iron trades and mining. Few boys are set to work under 13; and, no doubt, the same thing would happen in the iron trades as in mining—the masters would consider their labour as a nuisance rather than an advantage, if fenced about with all sorts of legislative “guards” (as they are called, but hindrances is the proper word), such as certificates of school attendance, &c. There is, however, some hope that the Bill while under the consideration of a Select Committee, to which it has been referred, will be so shaped that while children are protected from the covetousness of parents and employers, the trade will not be hampered by unnecessary and troublesome restrictions. We shall return to the subject next week.

THE LATE MAGISTERIAL DECISION IN STAFFORDSHIRE—RESPONSIBILITY OF COLLERY VIEWERS.

[FROM A CORRESPONDENT.]

In considering the later official reports of accidents in mines, we shall arrive at a clearer view of the nature of the latter, and what has been done, or may be done, to prevent them, by dividing the lists into two classes. Those terrible catastrophes which now and again sweep off hundreds of lives, plunge whole districts into funereal grief, and thrill with sympathy and sorrow the pulses of the nation, form the subject of special enquiries. We propose, in the few remarks we are desirous to make to confine ourselves rather to daily casualties and fatalities, which, although they come as “single spies,” reach at the end of a year the magnitude of battalions, and to see whether any gleams of possibility exist for the reduction of the sombre death-roll. Science and art have for years laboured incessantly to determine the precise nature of the deadly gases met with in mines, and to devise the best mechanical ways of winning the hidden treasures of the earth. Both have done much to divest subterranean workings of their mystery and danger, and we have arrived at a point at which the old risks are greatly diminished. It is a gratifying fact that in proportion to the amount of mineral raised the loss of life is hardly a fourth of what it used to be, and the same official and statistical reports which give us this satisfactory assurance point out also that it is chiefly to a stricter observance of discipline on the part of the workmen that we must look for a still further reduction of the death-rate. When fatalities are not purely accidental, they arise either from want of care or recklessness on the part of the miners themselves, or a neglect of proper precautions on the part of the mine managers. The indifference with which miners often risk their own lives and the lives of their fellow-workmen is so constant and so notorious, that the law very properly absolves, to a considerable extent, the managers under such circumstances from blame, and there are decisions innumerable in almost every court of adjudication in Great Britain parcelling out with extreme nicety the amount of responsibility resting upon the owner, upon his representatives, and upon the miners themselves. Of late years Lord Campbell's Act, which gives the widow or representatives of a miner killed at his work the opportunity of bringing an action for damages, has brought all the legal acumen of the country to bear upon these distinctions, so that it would seem almost as impossible to avoid saddling the right horse as to place the burden on the wrong one.

It is not surprising, then, that such a chorus of disapprobation from mine owners and managers should have arisen from the recent decision of Mr. Spooner, the stipendiary magistrate of the South Staffordshire district, in respect to an information laid by Mr. Baker, the Government Inspector of Mines, against Mr. James Cope, as the agent of a colliery, under the second general rule of the Mines Inspection Act, for having neglected to fence off a certain dangerous unused place, whereby three persons lost their lives. The details of the case, which were reported in the Journal of April 20, furnish a notable instance of the perversity with which men and boys employed in mines run into danger. The Bromford Colliery, where the accident occurred, belongs to Mr. Dawes. It has two pits, the “Near” and the “Far,” worked by two distinct sets of men, and no workman in the one has at any time a right to be in the other, although there is a communication between the two by a disused “gate-road.” Two boys and a young man of 20 years of age, who worked at the “Near” pit, wanted a holiday, and attempted to get round, so as to go up the shaft of the “Far” pit. On approaching the bottom they found some men at work, and, being afraid to pass them, attempted to get round by crawling through a quarter of a mile of circuitous passages, the timber props being so close that they could only get through them sideways. At last they found the route wholly impracticable, and, being unable to return, laid down and perished by choke-damp. Amongst the general rules to be observed in all coal mines, pursuant to 23 and 24 Vic., cap. 151, is the well known one—“That all entrances to any place not in actual course of working and extension, and suspected to contain dangerous gas of any kind, shall be properly fenced off, so as to prevent access thereto;” and these circuitous ways, impossible as they proved, not being fenced off, this rule had, no doubt, been contravened. The important question then arose, who was responsible? The Government Inspector commenced proceedings against Mr. Cope, Mr. Dawes's consulting mining agent; and, unless there was some ambiguity about the position of Mr. Cope, which does not appear on the face of the proceedings, that selection was erroneous. The magistrate may, possibly, have considered that the Government Inspector was a sufficient authority on the point, and that he was, therefore, justified in disregarding all the evidence given before him to prove that Mr. Cope was not the legally responsible “agent.”

It ought, however, to have suggested itself to Mr. Spooner that the Inspector might have acted upon his own impressions based upon imperfect knowledge or hasty information, as to Mr. Cope's real position; but that the evidence of Mr. Dawes, the owner, and others who were able to speak positively on the subject, and affirmed that a Mr. Gallear was “the person who had the care and direction of the mine on behalf of the proprietor,” ought to be taken as conclusive. The whole proceedings, however, showed that the magistrate, who is doubtless a good lawyer, and might in another district admirably perform the duties of a stipendiary magistrate, is not quite at home amongst miners, and seems to know but little either of the modes of working or the dangers to which the miners are subjected. We have a right to presume that is the case, as some of the local papers state that he designated the carbonic acid gas by which the three youths were choked as fire-damp; and, so far as the reports of what took place go, nothing could be more unsatisfactory than the judgment delivered. It is true that in the Act the word “agent” is defined to mean “any person having on behalf of the owner the care and direction of a colliery;” but Mr. Cope, although belonging to a body of men of the greatest value to mine-owners—that of “consulting mine agents”—had no such “care and direction,” which was clearly in the hands of Gallear, the underground agent of Mr. Dawes.

As it is more than probable that some legislation will take place

so long as to the management and regulation of mines and miners, the masters would do well to obtain some clearer and more distinct definition of individual responsibility, so that neither inspectors nor stipendiaries can in future fall into such grievous mistakes. We understand that the matter will be brought before Mr. Secretary Walpole, by a deputation from Staffordshire, which is arranged to wait upon the right hon. gentleman on Tuesday next.

THE PARIS EXHIBITION—NO. I.

[FROM OUR OWN CORRESPONDENT.]

Although the Exhibition is still far from complete, both as regards the building and the articles exhibited, the visitor can now find plenty to interest him until the other portions are finished, and the Englishman, especially if he be connected with mining and metallurgy, cannot fail to be proud of the prominence given to the English exhibits, and to the excellence of the articles exhibited. Entering the building by way of the principal door at the top of the grand avenue from the Pont de Jena, the English section is immediately on the right, and the first objects which meet the eye are Capt. BEAUMONT's tunnelling machine, the machinery of GARRETT, MARSHALL, and CO., of Leeds; the picturesquely cascade from the centrifugal pump of Messrs. Gwynne and CO., JONES and LEVICK's coal-cutting machinery, BASTIER's chain-pump, the model of the London and North-Western Railway Company's travelling post office train, with the apparatus for collecting and delivering the mail bags, and many other exhibits, which will be especially referred to subsequently. The novelties and curiosities are, perhaps, fewer than would generally be anticipated, but there is one machine, and it is in the English court too, which is undoubtedly destined to make a great noise at no distant time, both in the scientific and in the industrial world: it is the magnetodynamic machine of Mr. WILLIAM LADD, the well-known philosophical instrument maker of Beak-street, Regent-street. A detailed description of the machine must be reserved for a future notice, but its great merit is that the electricity is produced without the consumption of material, and with the application of only about one-fifth part of the power which has hitherto been necessary to obtain similar results. The principle involved is quite novel, and far in advance of all previously discovered.

BEAUMONT'S ROCK TUNNELLING MACHINE.—The first machine met with on entering is that of Captain BEAUMONT, R.E.; and, even were he not the chief of the English section, his invention would be entitled to be first mentioned, from its evident practical value. The principle involved in all tunnelling and mining machinery is necessarily very similar, the object being in nearly all cases to imitate the motion of the boring tool when used by the workmen in perforating the rock; but the character of the hole made, and the mode of utilising the work done, continually varies. In Capt. BEAUMONT's machine the motive-power used is compressed air; and it is assumed that its application will be to the removal of material which is not of commercial value; or, rather, it is assumed that the making of the tunnel, and not the getting of the material, is the chief object sought; hence Capt. BEAUMONT's efforts have been entirely directed to making progress in the most speedy and economic manner, and in this he has certainly every prospect of being most successful. The air may be compressed in any manner most convenient, so that it will only be necessary to refer to the boring apparatus. This consists of a series of long steel chisels of great strength, attached to, and readily adjustable upon, the periphery of a wheel or disc of the size of the tunnel to be driven, the disc being fastened to the end of the piston-rod, so that the whole of the chisels may be conveniently given a backward and forward motion simultaneously. As the piston-rod is continued through the back cylinder cover, the piston is at all times kept in correct position, and this back rod is made of great utility in working the machine, a pinion being made upon it which is operated upon by a screw, so that the ring of chisels has a rotatory as well as a backward and forward motion. As in all compressed air-engines, the quantity of air escaping from the machine, after having done its work, is considerable, so that the ventilation could not fail to be much improved. But the great practical improvement in the invention of Capt. BEAUMONT, and that which is calculated to make it of immense utility, is the mode in which the rock is removed. In all similar machines previously proposed the use of gunpowder was ignored, the object sought being the pounding down of the whole face of rock to be removed. Instead of this, Capt. BEAUMONT makes an annular hole of only 1 1/4 in. across, leaving a core of rock in the middle of only 3 in., or thereabouts, less than the size of the tunnel. But as he has a strong central chisel working upon the same disc as the ring of chisels, he has a good hole wherein to place a charge of gun-cotton or other explosive to remove the core. By this means the work progresses with a speed hitherto impossible, for both the machine and the gunpowder are at all times working under the most advantageous circumstances, the machine doing no more work than is absolutely necessary, and the gun-cotton is permitted to act with the greatest force upon a comparatively small quantity of rock upon every side of it, instead of having to remove a large mass on one side only.

BERNAY'S CENTRIFUGAL PUMP.—Almost immediately behind the above machine are the pumps of Mr. JOSEPH BERNAY, of Woburn-place, Russell-square, which appear to possess considerable merit. The outer surface of the revolving fan is entirely relieved from the pressure and friction of water contained in the casing, and it is claimed that these pumps, consequently, give out a far higher percentage of useful effect, or, which is the same thing, require less motive power than other centrifugal pumps hitherto made. All the waterways, passages, the form of the arms, &c., being of carefully ascertained dimensions and shape, they require a less number of revolutions than others for raising water or other liquids to given heights; and there is a joint between the fan near its outer diameter; and the casing not only preserves the efficiency of the same for high as for low lifts, but it entirely intercepts all direct communication between the suction and delivery pipes of the pumps when at work. In consequence of this, the power of suction is greatly improved, enabling these pumps to be fixed at a greater height above water level than has hitherto been attempted. The delivery flange is, by preference, cast in the middle of the highest part of the pump, which gives great steadiness to the pipes, and prevents the possibility of the pump ever being troubled by the accumulation of air in the casing. The invention is certainly a great step in advance in centrifugal pumps, and a more detailed and illustrated description of them will probably be published in a future notice.

STEAM PILE-DRIVER.—An excellent and economic pile-driver is exhibited in the next passage by Messrs. SISSEY and WHITE, of Hull, the object of which is to supply something more expeditious than the ordinary hand engine, and less cumbersome and costly than those usually worked by steam. Not amongst its least recommendations are its lightness and smallness of cost, as compared with the heavy and expensive steam-drivers hitherto used; and where staging is required the advantages are very great. It is easily moved, and by a contrivance in the carriage part can be transferred to other lines at any angle with great facility. It requires four men to work it, and consumes about 4 cwt. of coal or gas coke in 10 hours. The total weight of the driver and boiler is 6 tons, including the ram and mountings, which are 20 cwt. The bottom framing of the driver is 7 ft. 6 in. square. Its comparative lightness, and the small space it occupies, make it capable of being worked in any position or circumstance in which a common hand machine can be put, either on land or afloat. It will be perceived from the annexed drawing that the bottom framing is in two heights—the upper part revolving turn-table fashion on the lower one. The machine can thus be faced round to any of the four sides. The travelling wheels are castors, so that by lifting up each side with a lever the castors can be turned to run on a tramway at any angle. It is moved by fastening the end of a rope ahead, passing it over a roller under the winch, and taking a turn round the barrel. The pile is quickly pitched by attaching a common chain to the pile-head. The ram usually falls about 12 times in a minute, with a 5-ft. lift. The ram is lifted by means of an eccentric fixed in an opening made in the centre of it, and is made to revolve by a lever, to the outer end of which a cord is attached, and, on being drawn downwards, a bolt is shot out into the open link of the pitched chain in its upward motion. The bolt is withdrawn by

the other end of the lever striking against a staple fixed in the front of the guide-pieces, and the ram thus released then falls on the pile.

REPORT FROM SCOTLAND.

MAY 1.—It would be a great relief, as well as a very great cause of congratulation, if, for once, it was our good luck to be enabled to say that trade is coming round, and that the incessant depletion had been stopped. Last week we closed at 51s. 7½d. cash, and this week the peace news helped us up 6d. per ton in our Pig-iron Market, but there has been really little done in open market. On the other hand, it cannot be denied that the shipments and home consumption are exceeding present make; but, while there is next to no life in the market, there is nothing to give buoyancy to prices, and hence they sink by their own specific gravity. This week the shipments are nearly double what they were in the corresponding week of last year; but, then, it is to be borne in mind that the "rig," *par excellence*, had then culminated, and was rapidly retrograding. An additional furnace here and there are being put into blast, which will help to keep up stocks, and the miners are too needy to be able to play much longer at the four days a week game, so that, while the stocks on hand are getting lessened, the heating-in of the additional furnaces will nearly bring stocks back to an equipoise. The shipments sum up to a total of 12,490 tons, against 6770 tons in the same week of last year, but even the highest figure is scarcely up to the average of some former years. To-day the market was a degree firmer, and about 200 tons were sold at 51s. 1½d. cash in a week, and 52s. 3d. a month, closing sellers at these prices; buyers 1½d. a ton less. No. 1 Gartsherrie, 65s.; Coltness, 64s.; Glengarnock (at Ardrossan), 61s.

Finished Iron has not improved since my last, although the Block-hairn firm are rather busy with heavy plates and angle-iron for Messrs. Derry Brothers, shipbuilders, Dumbarton. There is also a little more doing for Greenock in ship-iron; but bars, rods, and guide-iron are very dull indeed. Some of the makers have been forced to reduce the number of their hands still further, in order to enable them to give three to four days to those that remain. Founders of pipes are falling off for orders, but makers of large castings are deficient of work. The Clyde Foundry, Greenock, with machinery, tools, and plant, is to be sold by auction on the 9th inst. The testamentary trust disposition of Alexander Cunningham, of the firm of Merry and Cunningham, coal and ironmasters, has been estimated for duty at under £60,000. The senior partner of the firm is said to be a millionaire, and more. Coals met with a full average demand for shipment, without any change in price. The quantity issued from the various Scotch ports this week was 24,580 tons, against 21,510 tons in the same week of last year. The colliers in Ayrshire have received notice of a reduction of wages, and about Holytown they are also to be reduced 6d. to 1s. a day. The colliers' secretary, *non maxima*, unable to do anything else for their advantage, has taken to addressing them in Latin. He is learned, but then he should have remembered that there is no need for his "casting his pearls before," &c.

The Victoria Shipbuilding Yard, Dumbarton, was last week purchased by Mr. Peter Derry, of Messrs. Derry Brothers, at the upset price of 30,900. We understand Mr. P. Derry occupies the building-yard in question during the construction of his new yard and premises, and that the building of the two vessels which he recently contracted to build for the Austrian Lloyd's Steam Navigation Company will at once be commenced.

The annual general meeting of the Institute of Engineers in Scotland and Scottish Shipbuilding Association was held at the close of last week. The institution's medal for the best paper read during the session 1865-6 was awarded to Mr. James Robertson, for his paper "On Frictional Screw Motions;" and the medal for the best paper "On Marine Engineering" was unanimously awarded Mr. Barnaby, assistant constructor of the Royal Navy, the subject being "The Connection of Plates of Iron and Steel in Shipbuilding." As copies of both of these papers have been forwarded to London, the readers of the *Mining Journal* will have an opportunity of judging of their merits on an early day.

Like their friends in the South, the Scotch engine-drivers and firemen have presented the board of directors of the North British Railway with a series of resolutions to have their existing condition improved, both as regards their hours of labour and rate of wages. Their request for 10 hours a day looks like reasonable, but the rate of wages is pitched too high.

REPORT FROM MONMOUTH AND SOUTH WALES.

MAY 2.—The prospects of the Iron Trade are, if anything, better than last week, the strong probability of peace being maintained on the Continent having, perhaps, exercised some influence on the market. Railway extensions are in contemplation in Russia, Germany, &c., but a war would put a stop to all commercial progress, and hence it is not surprising that the proposed Conference is hailed with general satisfaction. The order for rails on account of the East Indies has been secured for South Wales, two Welsh houses having divided the contract. Other contracts for rails are looked forward to from that quarter. There is no material change to note in the American enquiry. Home business remains quiet, although the tendency is to improvement. So long, however, as the railway companies are under a cloud, there will be nothing approaching activity in this branch of the trade. The plate-mills are only partially employed. The movement in pigs is, so far, sustained. For Tin-Plates there is a moderate sale, but it cannot be said that the orders in the market are numerous. In the Coal Trade the scarcity of tonnage is not quite so great as last week, a good many arrivals having taken place since Saturday. With a continuance of the present weather for a week or two there is no doubt that there will be an adequate supply of vessels. The continental enquiry keeps about the same, and the mail packet companies are taking about the usual quantity. It cannot be said, perhaps, that the trade upon the whole is in a satisfactory state, for the capabilities of the collieries are far in excess of the requirements of buyers. Housecoal merchants continue fairly off for coasting orders.

As a proof of the quality of iron that can be produced in this district, it may be mentioned that the whole of the iron used in the manufacture of Palliser shot is obtained from the Ebbw Vale Company's Works, Monmouthshire. This iron has an admixture in it of the celebrated spathose ores from the Brendon Hills, Somersetshire, discovered by the late eminent geologist, Mr. Ebenezer Rogers, of Abercarn, and leased by him to Mr. Thomas Brown, on behalf of the old Ebbw Vale Company. This, it is said, is the only deposit of spathose ore known in the kingdom, and hence, from the quality of iron produced from it, the Ebbw Vale Company (Limited) have an absolute monopoly, and it will give them a considerable advantage in the market.

The directors of the Alexandra Dock Company, Newport, have completed their arrangements for an immediate commencement of the works. Mr. Tredegar, who has carried out large works in different parts of the kingdom, is now taking steps to get the necessary plant on the construction of the Great Western, Monmouthshire, and Brecon and Merthyr Commissions. The Great Western, Monmouthshire, and Brecon and Merthyr Commissions are a *partner* to the undertaking, and the directorate includes Lord Tredegar, Mr. Crawshay Bailey, M.P., Mr. Thomas Brown, and other gentlemen largely interested in the trade of Monmouthshire. There is no purchase-money to be paid for the "land" required, but, in lieu of it, Lord Tredegar will take a royalty of 1s. 2d. per ton on all traffic to the docks. This is a precisely similar arrangement to that between Baroness Windsor and the Penarth Dock Company. The Alexandra Dock directors contemplate paying especial attention to the requirements of the coal trade, and they expect to secure a fair share of the Aberdare coal traffic.

Messrs. Woodruffe, Conway, Gilbertson, and Flower, as representatives of the tin-plate trade, were among the deputation that waited on Mr. Walpole on Monday, in reference to the proposed extension of the Factory Acts. Mr. Gilbertson explained the objections entertained by the tin-plate trade, and Mr. Walpole promised that the points raised should have his careful consideration.

An awful pit accident occurred at the Bedwelly Colliery, Tredegar, on Friday last. A bankman, named Nathaniel Hughes, and a girl, named Hannah Rees, were engaged in removing the loaded trams and putting empties on the cage. While in the act of pulling off a full tram, the engineer, Wm. Kerr, raised the cage before the tram was clear off, and Hughes was jerked backwards, but the unfortunate girl went headlong into the pit (220 yards deep), the tram following. Her remains were collected and brought to the bank in a sack. Deceased was about 17 years of age.

A Sick, Disabled, and Funeral Fund has been established at the Pontypridd Chain Works, under the presidency of Mr. Penn, the manager. The men have also determined to subscribe 3d. per annum to the Cardiff Infirmary. These are examples worthy of imitation by the working men of the district.

At the Newport Dock Company's half-yearly meeting, held at the offices, Newport, to-day, Mr. Samuel Homfray in the chair, the directors' report stated that the revenue had increased £3000, as compared with the correspond-

ing half-year, and it was recommended that the usual interest should be paid on the first preference shares, and that a six months' dividend should be declared on the second preference, leaving £637. to be carried forward. A coal staith, with extensive sidings, is being erected on the west side of the dock, which will give a large amount of increased accommodation for any further development of the coal trade. The Chairman moved the adoption of the report, which was seconded by Mr. Cartwright, who said he had some doubt as to whether they would be able to pay a dividend on the second preference out of the current half-year, because there had been a falling off in the receipts consequent upon the depression in trade. The whole country had been over-trading during the last 20 years, and they were now realising the result. Mr. S. Bachelor complained of the parliamentary expenses, and held that increased dock accommodation, as in the case of Liverpool, London, and other places, always resulted in increased trade. The report was adopted, and the dividends recommended were declared. The retiring directors were re-elected. The coal shipped in the dock during the half-year reached 219,894 tons, as compared with 177,595 tons in the corresponding half-year; and iron 42,385 tons, against 34,421 tons, showing a highly satisfactory increase under both heads.

The arrivals at Swansea include—the Magnet, from Pan de Azucar, with 880 tons of copper ore, for Richardson and Co.; the Trianco, from Aveiro, with 156 tons of copper ore, also for Richardson and Co.; the Jeune Columbe, from St. Malo, with 160 tons of zinc ore, for M. Rowland; the Day Star, from Bilboa, with 250 tons of iron ore, for W. H. Tucker; the Amelie, from Redan, with 72 tons of iron ore, for T. Walters; the Blue Jacket, from Lisca, with 210 tons of sulphur to order; the Try Again, from Girgenti, with 175 tons of sulphur to order; the Parkside, from Bilboa, with 221 tons of iron ore, for W. H. Tucker; the Edith, from Bilboa, with 265 tons of iron ore, also for W. H. Tucker; the Hermilio, from Aveiro, with 150 tons of copper ore and 30 tons of lead ore, for Richardson and Co.; and the James Cuckow, from Bilboa, with 241 tons of iron ore, for W. H. Tucker.

REPORT FROM NORTHUMBERLAND AND DURHAM.

MAY 2.—The Coal and Coke Trades are going on as usual, the obstruction on the North-Eastern Railway having been entirely removed—the place of the drivers and firemen on strike having been filled up partly by men who have returned to their employment and partly by strangers. The demand for most kinds of coal and coke continues good; the price of house coal at London has however, as might be expected, fallen lately, and the demand for the best house coal may be expected to be greater at this season. With respect to the general trade of the district, it continues to look a little brighter on the Tyne—that is, the ironworks, shipbuilding yards, &c., are certainly doing better, and are expected shortly to be at full work. It will, however, require some time yet for the establishment of the trade of the district on the same footing as before the disastrous panic of 1866; but at the same time it is evident that affairs are slowly but steadily advancing towards that position. But should a war actually break out on the Continent, as was apprehended, such an untoward event would have retarded the progress of trade very seriously.

The first sod has been cut for the first new shaft to be sunk by the spirited company who have joined for the purpose of developing the coal mines at Throckley, a few miles west of Newcastle. These works have been carried on for a number of years on a small scale, and a large quantity of excellent fire-bricks have been made and sold. Operations have been mostly confined to seams near the surface, but the company just formed intend to sink shafts down to the lower seams, where it is understood there is plenty of good coal entire; indeed, the engine seam and some others are entirely unworked. Therefore, an extensive and profitable colliery, coke works, and fire-brick works may be expected to be opened here in the course of a few years.

Much attention has been given here lately to the consumption of smoke, and at the same time economising fuel. The operation of the Health of Towns Act has, of course, asserted this movement, and various schemes have been tried to effect this purpose, more or less successful. On the whole, it must be confessed that but little progress has been made, but that is no reason why the matter should be given up. No doubt the great desideratum—simplicity of construction and effective working—will be arrived at some time. The rather complicated and expensive apparatus, known as Jukes's, has had many friends of late, and it is generally acknowledged that this apparatus is perfectly efficacious with certain kinds of coal, but it is also alleged that it does not work well with other kinds of coal. At any rate, a reaction has set in against this apparatus, and it is not held in so much estimation as it was a short time ago. It is charged against it that the bars, after getting out of order, are very difficult and expensive to repair. Several other systems have been tried here, and one of the most successful, and one, we believe, destined to make considerable advances, has made some progress lately. We allude to "Dunn's Patent Hollow Bars." They have been tested in many cases with considerable success, and they will, we believe, come more generally into use. They have the advantage of cheapness and simplicity, and are acknowledged by competent engineers to be effective in saving fuel, and preventing the formation of smoke. We shall give some further particulars concerning these bars shortly. They are manufactured at Messrs. Abbot's, Gateshead, but are the invention of Mr. Dunn.

A general meeting of the North of England Institute of Mining Engineers is to be held this day, at Neville Hall, Newcastle, when the following business will be brought before the meeting:—I. Mr. W. Lishman's paper "On a System or Working Coal by the Long Wall Plan" will be open for discussion; and also that of Mr. W. Cockburn, "On Underground Conveyance in the Cleveland District, with remarks on the Clip Pulley." An abstract of the proceedings will appear in next week's Journal.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

MAY 2.—The prospect of a peaceful termination of the Luxembourg question has led to the receipt of further orders from Germany and France, and the home demand is fully as good. Should the disputes in the ironworks in the United States continue, more orders may be expected for the quarter.

The case of Regina v. Cope continues to be a good deal discussed. The defendant, Mr. James Cope, as agent to Mr. Dawes, owner of the Bromford Colliery, West Bromwich, was, as previously stated, fined by Mr. Spooner, the stipendiary magistrate, for neglect of the second general rule, requiring the entrances of all places not in course of work or extension, and suspected to contain dangerous gas, to be fenced. It is stated that it has been agreed by the Mine Agents' Association to send a deputation to the Home Secretary, on the general subject of the working of the Mines Inspection Act, and with special reference to this mine, which casts the onus of carrying out the general rules on the mine agents. In some articles which have appeared in two local papers, it is contended that the responsibility in these cases should rest on the contractors or chartermasters, instead of the owner, or the agent acting in his behalf. There can be no doubt that this would be entirely to reverse the whole principle of the Mines Inspection Act, which is to impose the responsibility of the general arrangements on the owner, or his agent. The chartermaster is the leader of a body of miners who get the coal at so much per ton. He is under the strongest temptation to get as much coal by as small an expenditure of labour as possible; and inspection would be almost vain if such a man, often incapable of reading or writing, were to be looked to for the general safe working of a mine. Under the Special Rules, his deputy and the working colliers are responsible for acts which must rest with them, but if an owner is to say "I let the working of my mine to chartermasters at so much per ton. I pay that for the coal being raised, and they are the persons responsible for the safety of the miners," the whole basis of responsibility slips away. Every Mine Inspector in Staffordshire has always contended for placing the responsibility as high as possible. The owner, or his agent, can impose any terms on the chartermasters, and can inflict the greatest punishment—dismissal—for neglect of duty; and on their choice of chartermasters, and the system of working they impose upon them, depends essentially the safety of the lives of the colliers.

The question of the modification of the South Staffordshire Special Rules was discussed some months ago, but a delay was granted at the request of the trade for further consideration, with the exception of one rule, which was rendered more stringent as to timbering. It is understood that a further delay is now sought until the Committee of Mines has reported. The deputation of the Iron Trade to the Home Secretary in relation to the extension of the provisions of the Factory Acts to iron-works made some sweeping proposals. They amount to this, that so long as no boys are employed under 12 years Government shall not interfere. The holidays and so on, which are permitted, are certainly not in themselves worth being made the subjects of legis-

lation. There appears everywhere a strong opposition to any modification of the half-time system, even as applied to employment on alternate days.

A singular accident occurred on April 24 at the Herbert Park Colliery, near Darlaston. Edward Williams, a sinker, was going down the shaft, when the chain was seen to oscillate, and when the cage got to the bottom he was lying across it insensible, and bleeding from a scalp wound at the back of his head. It was clear to the surgeon who was sent for that he was suffering from apoplexy, from which he soon died. He was a man of intemperate habits, and no doubt fell on the edge of the cage in a fit as he was going down. His death was not, therefore, a colliery accident.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

MAY 2.—There is no alteration in the state of the Iron Trade in North Derbyshire. The holidays having been got over, business has resumed something approaching its ordinary proportions, although they are by no means very large just now. The blast-furnaces are kept fully going, but the forges are by no means active. With a fair demand for pipes, bars, and hoops, nearly all the other branches are quiet. The Coal Trade at Clay Cross and Staveley remains tolerably active, and a heavy tonnage continues to be sent from those places to London, as well as into Worcestershire, Gloucestershire, and other places over which the Midland Railway has running powers. The Sheffield trade remains quiet in nearly all branches, with the exception of the locomotive engine and Bessemer steel departments, which are now kept fully going. Another branch of the iron trade is also showing symptoms of revival—that is the armour-plate business. For a considerable time inactive, the well-known firms of Brown and Co. and Cannell and Co. are well supplied with orders. The former firm is just now engaged, not only with some orders for our own Government, but also for Spain, which appears to be desirous of coming out as a great maritime power. The question of steel v. Iron Rails appears to be satisfactorily settled in favour of the former, for we find that whilst there are few if any orders for iron rails, the makers of those made by steel have more orders in hand than they can complete. The iron trade throughout the whole of the South Yorkshire district remains very quiet indeed. At Thorncliffe and Chapelton, where there is one of the largest works for the manufacture of gas and water pipes, as well as for stoves-grates and ordinary castings, business is remarkably dull. At Elsecar and Milton matters are still worse, for the mill hands having refused to go on what is known as the long-weight system, the whole of the men are out of work, the only business going-forward being the blast-furnaces, which are kept going to carry out profitable contracts which the Messrs. Dawes have with Earl Fitzwilliam—very much to the disadvantage of the latter, who, by the arrangement made by his father, has to supply not only coal, but ironstone, at a price which leaves a very slight margin of profit, if it leaves any at all. There is only a moderate business doing in house and steaming coal, but the prospects of the latter are improving. The stacks of "hards," or steam coal, are now likely to altogether disappear, as some of the collieries, including the Darfield Main, over which Mr. Hantriss so ably presides, have been fitting out the Hull steamer, which commence to-day to plough to St. Petersburg and other Northern ports, it is believed that the water is now open. To London and the South there is a moderate business being done in house coal, and the same may be said with regard to the cotton districts of Lancashire. To Leeds and Sheffield there is not so much doing—a proof that the ordinary iron trades are far from active. During the week there has been several offers for coke for exportation, but as our masters have more orders in hand for home consumption than they can complete, the former could not be entertained.

At the Oaks Colliery there is no alteration whatever, the pipe down the No. 2 shaft acting most satisfactorily. The impatient desire shown by many of the men who have relatives in the pit to have the shafts opened out is not at all shared in by the mining engineers. In talking the matter over yesterday with Mr. Embleton of Methley, and Mr. Potter, of Monk Bretton, two gentlemen in the very highest class as mining engineers, they stated that the moment the pit was considered safe the shafts would be unsealed; but, as the engineers would be to a great extent liable for any accident that might now take place, they were determined that no volunteers should be enlisted before they themselves went down in the first instance. It may, therefore, be presumed that every endeavour will be made to find out whether any fire exists at the bottom. Boring continues to be made in the neighbourhood of Ardsley for the new shaft, the great desire being to avoid a very extensive "thraw," which runs from the Barnsley field as far as Wortley, being a distance of more than 10 miles. The subscriptions in aid of the widows and orphans has been brought to a close, and the amount which has been received by Mr. Innes, the local treasurer, is upwards of £30,000. A like amount has been sent to the Mansion House Committee to be divided between the sufferers of the Oaks and Taikes Collieries, but so far the London Committee have shown the greatest reluctance in parting with the money subscribed for the widows and orphans. To Barnsley they have not yet sent a penny, and although asked frequently to have the fund appropriated, they have not done so. The matter is now sufficiently advanced for the individual subscribers to demand of the Mansion House Committee either to give the money to the objects for which it was subscribed, or give some good reasons for their withholding it. In South Yorkshire the conduct of the London Committee has led to a stormy feeling of dissatisfaction, as it will, no doubt, cause amongst the subscribers who were desirous of alleviating the sufferings of the bereaved, but, so far as London is concerned, might have starved.

EXTRAORDINARY STRIKE.—About 400 miners employed at the Carr-house Colliery, near Rotherham, were thrown out of employ on Wednesday in consequence of a strike on the part of about 40 boys, whose labour is necessary to the working of the pit. Five of the boys had been fined 2s. 6d. each for breaking their lamps, but on it being found that the damage has not so serious as was expected, the fine was reduced to 1s. 9d. The boys demanded that the whole of the fine should be repaid, and when their demand was refused their compatriots made common cause with them, and yesterday morning refused to go down the pit. The men who had gone down were compelled to return, and the pit was thrown idle. Proceedings are to be taken against the youthful delinquents.

FACTORY ACTS EXTENSION BILL, AND THE IRON TRADE.—A deputation from the Iron and Tin-Plate Trades of England had an interview, on Monday, with the Right Hon. S. H. Walpole, at the Home-office, with reference to the proposed Extension of the Factory Acts. The deputation was accompanied by the following members of the House of Commons:—The Right Hon. C. P. Villiers, the Right Hon. C. A. Adderley, Mr. Grenfell, Mr. Dulwyn, Mr. Beecroft, Mr. Beaumont, Mr. Leveson Gower, Colonel Duncumb, Mr. C. F. Sartree, Mr. F. Milbanke, Mr. Headlam, Mr. Cowen, Mr. W. O. Foster, Mr. H. W. Foley, Mr. W. S. Allen, and Mr. W. Gwynell.

The deputation consisted of Mr. W. Barrows, Chairman, and Mr. Walter Williams, jun., honorary secretary of the South Staffordshire Ironmasters' Association; Mr. Wragge, Chairman of the North Staffordshire trade; Mr. William Hopkins, Chairman of the North of England trade; Mr. Woodruffe (Chairman) and Messrs. Gilbertson, Flower, and Charleson, representing the tin-plate trade; and Messrs. W. Mathews, J. Hartley, J. P. Hunt, W. Sparrow, George Barker, F. Smith, Robert Heath, W. Udall, Thos. Horton, T. W. Ritson (Leeds), and J. O. Butler (Leeds).

The Right Hon. C. P. VILLIERS, in introducing the deputation, pointed out to Mr. Walpole that, as he was advised, the Factory Acts Extension Bill was not applicable in its present form to the iron and tin-plate trades; but that with certain modifications it might be made suitable. He suggested, on behalf of the deputation, that the Bill should be sent to Select Committee for further enquiry.

Mr. W. MATHEWS contended that it was extremely objectionable to legislate upon such evidence as had been collected by the Children's Employment Commission, and published in their report. Many of the statements made in the report were incorrect, not so much from intention as probably from the want of proper means of interpretation. Bearing this in mind, he considered, and was directed to state, that interference on such partial evidence would be injudicious and improper. Examining the Bill in detail, Mr. Mathews pointed out that it would most likely have the effect of dispensing with juvenile labour altogether. He likewise condemned the proposed Saturday half-holiday, pointing out that in the majority of instances Monday is already a complete holiday to the bulk of the persons employed in the iron trade. Physical hardship there is none. Iron-workers—both boys and men—are as strong and healthy as those in any trade, more so than those who work in hot factories. The Bill had been drawn up with an entire ignorance of its effect on masters and men, and he hoped Mr. Walpole would refer it to a Select Committee.

Mr. W. WRAGGE having spoken in similar terms, Mr. GILBERTSON explained the objections entertained by the Tin-Plate trade.—Mr. BEECROFT, M.P., then made a few observations; after which Mr. W. SPARROW went

Young persons to work only six nights per fortnight.
Liability of employers for improper application of juvenile labour.
Medical certificates.

Clock exposed for hours of labour, as defined by Act, and modifications as annexed in schedules, temporary and permanent.
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II.—Position accepted by the Iron Trade in reference to Factory Acts Extension Bill.

1.—That all above twelve years of age should come under the category of young persons.

2.—That ironworks proper, and blast-furnaces, should be free from any legislative enactment respecting inspection, for all persons more than twelve years of age, beyond those passed in the general Bill, as follows:—i.e.: All young persons and women shall have one half-holiday per week.

No young person shall work more than seven nights per fortnight, nor work in the preceding or succeeding day, unless for such period as is required to make up for lost time through accident.

That four whole holidays shall be given in the year to all young persons and women, and that four-and-twenty hours' clear notice shall be given of those days to be considered as holidays.

That the hirer shall be considered the person with whom the actual contract is entered into, whether the employer or a sub-contractor, and he shall be responsible for any dereliction of the Act, and subject to all pains and penalties therefrom.

That the owner or occupier of any work employing children under twelve years of age shall give notice to the Secretary of State for the Home Department, requesting him to consider such work as a factory, and shall submit to inspection under the Factory Act, and comply with all requirements therein as to half time, educational certificates, medical certificates, &c.

That the provisions of the Act shall not come into operation for months after the passing of the Act.

That no Inspector or sub-Inspector shall have power to enter works, unless properly appointed by the Secretary of State, and that no refusal to inspect be considered as such unless refused after a proper identification is forthcoming on the part of such Inspector as to his appointment and person.

A deputation of members from the following firms in Lancashire and Yorkshire:—Sharp, Stewart, and Co. (Manchester); Parr, Curtis, and Madely (Manchester); J. Harrison and Co. (Blackburn); May, and Platt (Manchester); Peel, Williams, and Peel (Manchester); Beyer, Peacock, and Co. (Manchester); Musgrave and Sons (Bolton); Wren and Hopkinson (Manchester); E. Bellhouse and Co. (Manchester); Darlington and Sellers (Manchester); Clapham and Sellers (Manchester); W. Dickinson and Son (Manchester); Lees and Beard (Manchester); and J. and E. Wood (Manchester), employing, in the aggregate, upwards of 9000 hands—had an interview with the Right Hon. Spencer H. Walpole, at the Home Office, on Thursday, to oppose the extension of the Factory Acts to the engineering, machine making, boiler making, and metal founding trades. The deputation was introduced by Colonel Wilson Patten, M.P., Mr. Charles Turner, M.P., Mr. Bazley, M.P., Mr. Joseph Fielden, M.P., Mr. W. H. Hornby, M.P., Colonel Gray, M.P., and Mr. James, M.P.

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GUIDE TO INVESTORS.—Mr. SPARGO'S "Guide to Investors," for the present month contains Leading Articles on Railway Investments, the Revenue, Monetary Affairs, &c.; a Tabular Statement of Banking, Mining, and other Companies; City and Commercial Facts and Incidents; and a Price List of Shares in Banks, Canals, Railways, Bridges, and Finance Companies. It also contains Rate of Discount at Home and Abroad; together with necessary detailed information connected with the Stock and Share Markets, Mines, and Miscellaneous Companies. The City Article affords the most recent and authentic information concerning the stock, share, and produce markets.

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Address, G.W. JONES, General Manager, Cardiff and Merthyr Guardian office, 1, John-street, Cardiff.

Patent forwarded on application.

It is WEIGHT being about TWENTY-FIVE PER CENT. LESS than ORDINARY GUNPOWDER, and EQUAL in STRENGTH, bulk for bulk, an IMPORTANT SAVING is EFFECTED on the score of CONSUMPTION.

It creates, on explosion, only about ONE-HALF as much SMOKE as ORDINARY GUNPOWDER, and this smoke being of a lighter nature soon passes away, and an IMPORTANT SAVING is thus EFFECTED on the score of TIME.

It is ADAPTED to ANY CLIMATE, DOES NOT BECOME WASTEFUL by EXPOSURE to the ATMOSPHERE, is NOT MORE DANGEROUS in use than ORDINARY GUNPOWDER.

Testimonials forwarded on application.

It possesses the following advantages:—

It is ADAPTED to ANY CLIMATE, DOES NOT BECOME WASTEFUL by EXPOSURE to the ATMOSPHERE, is NOT MORE DANGEROUS in use than ORDINARY GUNPOWDER.

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SALE OF THE NANT COLLIERY.

THIS SALE has been FINALLY FIXED to TAKE PLACE at the Grosvenor Hotel, Chester, on MONDAY, the 13th day of May, 1867, at Three for Four o'clock P.M., punctually. Particulars, with plans and sections, may be had from the Liquidator, ALFRED HARRISON, Esq., 48, Paradise-street, Birmingham; ROBERT H. FOSTER, Esq., Solicitor, Birmingham; or the Auctioneer, Eastgate, Chester. JOHN PICKERING, Auctioneer.

SALE OF FREEHOLD ESTATE AT BISTREE, NEAR MOLD.

M. R. PICKERING has been instructed by the Proprietors to SELL, BY AUCTION, at the Grosvenor Hotel, Chester, on Monday, the 13th day of May, 1867, at Four for Five o'clock P.M., subject to conditions which will be produced at the time of sale, all that very compact and valuable property, called the BISTREE ESTATE.

Containing about 150 acres of very excellent LAND, with TWO HOMESTEADS and SEVEN COTTAGES thereon, all of which are in capital repair. Part of the land adjoins the Padeswood Station, on the Chester and Mold line of railway, and contiguous to Buckley and Mold. A great portion of the land is very eligible for building sites, being beautifully situated, commanding fine views, with nearly a mile of frontage to the Chester and Mold turnpike-road, on the south side. The estate is well timbered, and the land of undeniably quality. Plans of the estate may be obtained from MESSRS. TYNDALL, Solicitors, Birmingham; or the Auctioneer, Eastgate, Chester; or MESSRS. TYNDALL, Solicitors, Birmingham; or the Auctioneer, Eastgate, Chester.

IMPORTANT SALE OF A PLATINA VASE, with APPARATUS, Having served in the Concentration of Sulphuric Acid in the Manufactory of Chemical Products of MESSRS. VAN DER ELST, rue de l'Artifice, Brussels.

LE RECEVEUR DES DOMAINES, at Brussels, begs to inform Manufacturers and others that he has received instructions to SELL (by sealed tenders drawn up on stamped paper, and forwarded as registered letters to M. Le Directeur de l'Enregistrement et des Domaines, rue Louvain, No. 96), the above-mentioned PLATINA VASE, weighing 28 kilogrammes 260 grammes, including the ACCESSORIES. This apparatus, constructed in 1861 by MESSRS. DESMONTIS and QUENNESTEN, rue Montmartre, No. 56, Paris, is at present in full working order.

The tenders, naming in full letters the amount offered, will be opened Saturday, 25th May, 1867, at One o'clock in the afternoon, in the Salle des Adjudications des Domaines, 96, rue Louvain, and must be approved of (before the sale is considered terminated) by the above-named Directeur des Domaines. The tenders to be directed—"For the Purchase of a Platina Vase."

For further particulars, as to conditions of the sale, mode of payment of the principal sum, and 10 per cent. for expenses, address, Bureau des Domaines a Brussels, rue des Cendres, 14.

The vase will be on view Monday and Thursday of every week, from the 26th April to the 23rd May, at the Treasury Office (Bureau de la Dette Publique), rue de l'Orangerie, 11, Brussels.—Brussels, April 23, 1867.

WEST NANTY LEAD MINE, PARISH OF LLANGWRIG, MONTGOMERYSHIRE.—Notice is hereby given, that this Mine, with all the VALUABLE MACHINERY and PLANT thereon, will be OFFERED FOR SALE, BY PRIVATE CONTRACT.

Tenders for the same will be received by me up to the 15th of May next.

The set is extensive, and a new lease will be granted to approved tenants on the same conditions as that held by the West Nanty Mining Company (Limited), at 1-16th royalty.

The Mine is worked by water-power, and has recently been supplied with excellent pumping, winding, and crushing machinery, which is as good as new, and is well furnished with all necessary plant for immediately resuming the working.

A limited trial only has as yet been given to this mineral ground, which is worthy of being extensively worked.

The property is approached by a good road connected with the main road, and is about five miles from the village of Llangwrig and ten miles from Llanidloes.

Further particulars may be obtained on application.

HENRY THOMAS, Liquidator, No. 5, Queen-street-place, London, E.C.

April 22, 1867.

NANTY LEAD MINE, PARISH OF LLANGWRIG, MONTGOMERYSHIRE.—Notice is hereby given, that this Mine, with all the VALUABLE MACHINERY and PLANT thereon, will be OFFERED FOR SALE, BY PRIVATE CONTRACT.

Tenders for the same will be received by me up to the 15th of May next.

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Further particulars may be obtained on application.

HENRY THOMAS, Liquidator, No. 5, Queen-street-place, London, E.C.

HAWKMOOR MINE, GUNNISLAKE, MATERIALS will shortly be OFFERED FOR SALE, BY PUBLIC AUCTION, of which due notice will be given.—Particulars may be had of Mr. THOMAS KNIGHT, Gunnislake.

TO BE LET, OR SOLD, AN EXTENSIVE AND VALUABLE COLLIERY in WARWICKSHIRE, containing all the best measures of COAL and beds of IRONSTONE of the WARWICKSHIRE COAL FIELD. It is worked by the owners, and raising at the rate of about 30,000 tons of coal per annum. The ironstone can easily be worked in addition to the coal.

The colliery is in immediate connection with the London and North-Western Railway and Coventry Canal by convenient sidings and wharfs.

The whole of the STEAM-ENGINES, with the fixed PLANT, may be taken at a valuation, or be leased, so as to require a very moderate capital.

Good managers' house, farm house, suitable colliery and farm buildings and cottages, with about 60 acres of surface land, may also be leased, either in part or the whole.

This is an opening such as is seldom offered, and well worthy the attention of persons willing to embark in the coal and ironstone mining, there being an excellent market, and the character of the coal and ironstone first-rate and well known.

For further particulars and permission to view, apply to Mr. J. T. WOODHOLME, Mining Engineer, Derby; and Messrs. TROUGHTON, LEA, and KIRBY, Solicitors, Coventry.

SAFETY FUSE.—MESSRS. WILLIAM BRUNTON AND CO., PENHALICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE, upon warrant that it will be equal to, if not better than, any to be procured elsewhere.

Swan Rope Works.

GARNOCK, BIBBY, AND CO., CHAPEL STREET, LIVERPOOL, MANUFACTURERS OF FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES. MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope. WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

JOHN AND EDWIN WRIGHT, PATENTEES. (ESTABLISHED 1770.) MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED

PATENT FLAT AND ROUND WIRE ROPES, From the very best quality of charcoal iron and steel wire.

PATENT FLAT AND ROUND HEMP ROPES. SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAILING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON. UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM. No. 2, OSWALD STREET, GLASGOW. C.I. OFFICE, NO. 5, LEADENHALL STREET, LONDON, E.C.

CREASE'S NEW AND IMPROVED PATENT BORING MACHINE.—In consequence of the various and IMPORTANT IMPROVEMENTS that an experience of several years has enabled the inventor to introduce into these machines, he can with the most perfect confidence recommend them for their increased DURABILITY, SIMPLICITY, ECONOMY, and SPEED to be attained by their adoption in DRIVING LEVELS or DRIFTS. The inventor has made arrangements to supply them in any quantity, with warranty. Orders executed according to their date of priority.

Address, EDWARD S. CREASE, Tavistock, Devon.

THE PRACTICAL MECHANICS' JOURNAL for MAY, price 1s., with two large plate engravings of "Plans and Sections of the Paris Exhibition," and forty-seven wood engravings. Original articles on the General Arrangements and Building of the Paris Exhibition of 1867; on Some Points of Practice in Iron Founding; How to Make Safes Safe; the New Albert Harbour Works, Greenock; Hartlepool Harbour; Medallion Engraving Machine; Equibrat d'Slide Valves. Recent patents: Transmitting Messages—Captain F. J. Bolton; Securing Corks—J. H. Johnson; Taps or Cocks—J. H. Johnson; Heating Gas—B. F. Stevens; Gate Bars—J. H. Johnson; Ornamenting Floor Cloths—John Longbottom. Law reports, reviews of books, mechanics' library, correspondence, scientific societies, monthly notes, list of patents, &c.

London: Longmans, Paternoster-row; Editors' Offices (Offices for Patents), 47, Lincoln's Inn-fields, and 166, Buchanan-street, Glasgow.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the PENHALE AND LOMAX CONSOLIDATED SILVER-LEAD MINING COMPANY (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, BY PUBLIC AUCTION, on Tuesday, the 21st day of May instant, at Twelve o'clock at noon, at PENHALE AND LOMAX CONSOLIDATED SILVER-LEAD MINES, in the parish of Perranzabuloe, within the said Stannaries, subject to such conditions as shall be then and there produced, all the interest of the said company of and in the MINE SETT or GRANT, by virtue of which the mining operations of the said company have been carried on, and the undermentioned MINING MACHINERY, PLANT, and MATERIALS, viz.:

ONE STEAM PUMPING ENGINE, 66 in., 10 ft. stroke in cylinder, and 8 ft. in shaft, with first piece of rod and windlass; TWO BOILERS, 14 tons each.

Shears and shives, complete. Boiler, 9 tons.

Capstan, 13 ft. 18 in. working barrels.

Windbores and pumps, various sizes.

Plunger.

and door pieces.

Plunger poles.

Stuffing boxes and glands.

Steam winding engine, 26 in., 8 feet stroke, with fly wheel and whim cage.

Steam capstan, with crank shaft, tooth wheels, and wood stand.

Also, the account house and office furniture.

HODGE, HOCKIN, AND MARRACK, solicitors, Truro. Dated Registrar's Office, Truro, May 2, 1867.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WEST ROSEWARNE MINING COMPANY.—The Registrar of this Court has appointed FRIDAY, the 10th day of May instant, at Eleven o'clock in the forenoon, at his office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WILLIAM MICHELL, Registrar of the said Company.

Dated the 1st day of May, 1867.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN RE GREAT WHEAL FORTUNE MINE. TO BE SOLD, pursuant to an Order made in a Cause Robinson v. Aston and others, dated the 22d day of February last, at the Registrar's Office, Truro, on Wednesday, the 15th day of May instant, at 12 o'clock at noon precisely.

5 (1798s) PARTS or SHARES of the defendant, James Helsten.

5 (1798s) PARTS or SHARES of the defendant, R. W. James.

1 (1798) PART or SHARE of the defendant, Robert Libby; and

18 (1798s) PARTS or SHARES of the defendant, James Vivian, and William Hosken, and Samuel Hosken, as assignees of the estate and effects of the said James Vivian.

Of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Truro. (Agents for Grylls, Hill, and Hill, plaintiff's solicitors, Helston.) Dated Registrar's Office, Truro, May 2, 1867.

In Chancery.

RE CLEVELAND IRON COMPANY (LIMITED).

THE NEW IRONFIELDS OF ENGLAND.

M. R. CHARLES FURBER is instructed by F. WHINNEY, Esq., the Official Liquidator (with the approbation of His Lordship the Master of the Rolls), to SELL, BY AUCTION, at the Black Lion Hotel, Stockton-on-Tees, in the county of Durham, on Wednesday, May 15, 1867, at Two for Three o'clock precisely, the VALUABLE LEASE of the

IMPORTANT IRON MINE,

comprising an area of 218 acres in and under certain FARMS, called SKELDRIDGE and FOWLER GREEN, in the Township of Commandole, in the Cleveland district, lying between the Castleton and Kildale Stations of the North Yorkshire and Cleveland Railway, to which it adjoins, and is connected by a siding. All the necessary preliminary outlay has been made to raise the ironstone, and a splendid shaft has been sunk under the superintendence and upon the plans of Mr. J. G. Beckton, the well-known mining engineer, by which the main seam of the Cleveland ironstone has been reached, which exceeds in richness both in quality and quantity all anticipations.

The works are ready for immediate profitable working. The lease is for 99 years. The royalty only 4/5d. per ton, and the purchaser will be entitled to raise 64,000 tons of ironstone free of royalty.

The mines and works may be viewed on application to Mr. WATSON, the resident manager, of whom particulars and conditions of sale may be obtained; as also of F. WHINNEY, Esq., Official Liquidator, 8, Old Jewry; of MESSRS. DRAKE and CHUBB, Solicitors, 14, South-square, Gray's Inn; at the Black Lion Hotel, Stockton-on-Tees; and at the Auction and Estate Offices in Warwick-court, Gray's Inn.

FOREST OF DEAN, GLOUCESTERSHIRE.

VALUABLE MINING PROPERTY.

M. R. C. A. COURT WILL SELL, BY AUCTION, at the Angel Hotel, Coleford, on Wednesday, the 8th day of May, 1867, at Three o'clock P.M., subject to conditions of sale, to be then produced:—

THE ATLAS IRON MINE GALE.

LOT 1.—THE ATLAS IRON MINE GALE, situate near to the town of Coleford, and in the parish of Newland and township of West Dean. The Gale comprises all the VEINS of IRON ORE underneath an area of 450 acres, or thereabouts.

The Gale is situate within half a mile of the intended route of the Worcester, Dean Forest, and Monmouth Railway, for which an Act has been obtained.

The value of the Forest of Dean iron ore is well known. The yield of the Easter Iron Mine, which adjoins this Gale, has been very abundant, and of the richest quality.

The Coleford Iron Mine Gale, which also adjoins the Atlas Gale, was purchased by the present proprietors, prior to the passing of the Worcester, Dean Forest, and Monmouth Railway Bill, for £10,000.

The Atlas Gale is sufficiently extensive to be divided into two or more independent and valuable works.

The lowest vein of iron ore will be won by sinking to a depth of 150 or 200 yards, and the upper vein will be reached at 110 yards, or thereabouts.

The inclination of the strata is slight, and the cost of winning the lower vein is expected to be moderate. The Gale is held under a grant from the Crown, which will be produced at the sale, or can be inspected previously.

For further particulars apply to Messrs. POWLES and EVANS, solicitors, Monmouth; Mr. WILLIAM ROBERTS, jun., solicitor, Coleford; or the Auctioneer, Monmouth.

PRELIMINARY ADVERTISEMENT.

M. R. WHEATLEY KIRK respectfully announces that he is instructed to ARRANGE, CATALOGUE, and SELL, BY AUCTION, about the third week in May, at the VALUABLE PLANT, STEAM ENGINE, BOILER, ENGINEERS' TOOLS, UTENSILS, &c., on the premises of the VICTORIA CARRIAGE WORKS, SALTNEY, CHESTER.

Further particulars in future papers and catalogues, which may be had at the offices of the Auctioneer, 8, Essex-street, King-street, Manchester.

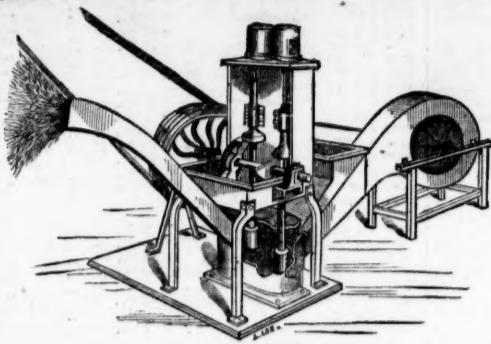
FREEHOLD COTTON MILL, IN PRESTON, NORTH LANCASHIRE.

TO COTTON SPINNERS, MANUFACTURERS, AND OTHERS.

M. R. WHEATLEY KIRK is instructed to SELL, BY AUCTION, on Tuesday, the 14th day of May, 1867, at the Clarence Hotel, in Manchester, at Three o'clock P.M., in One Lot (conditions of which will be then produced), all that PLOT or PARCEL of FREEHOLD LAND, upon which all that substantial fire-proof COTTON MILL is erected, called

WELL FIELD MILL,

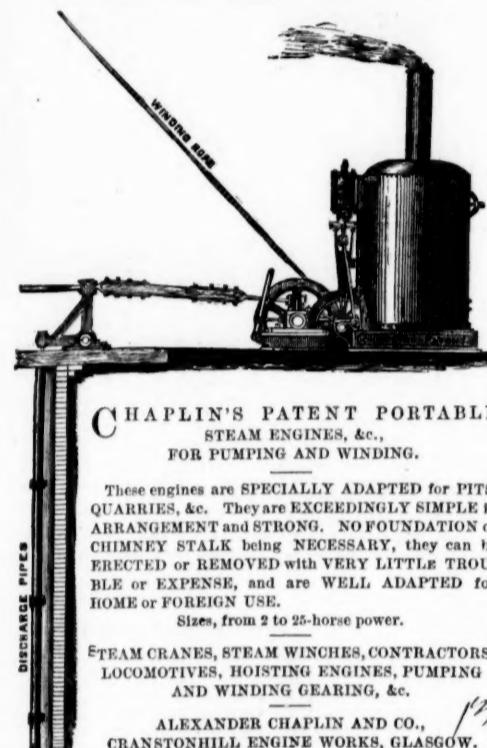
In PRESTON, NORTH LANCASHIRE, containing 20,000 yards, or thereabouts. The mill buildings are all fire-proof, brick-built, and most substantial erections, and nearly equal to new. The main building is five storeys (including the attic), and contains eight bays of 10 ft. 6 in. each—viz., 84 ft. by 9 ft

CHILD'S PATENT
ATMOSPHERIC ORE STAMP AND QUARTZ CRUSHER.

THIS is an IMPROVED STAMP, and will give as many blows per minute as an ordinary 10-stamp mill, and of far greater force, giving an effective blow of from 150 to 200 tons per minute, and will crush any known ore to an impalpable powder, saving every particle of the product for future operations,—a result not before obtained by any stamping process. Greater economy is combined than by any other known method. The patentee has erected a machine near his office, where he invites (by appointment) experienced and practical miners, engineers, chemists, metallurgists, and all others interested, to inspect its results. Every facility will be given for experiments upon different ores, and all other substances to be crushed.

For particulars, address— A. B. CHILDS,
No. 481, NEW OXFORD STREET, LONDON, W.C. 138

Prize Medal—International Exhibition, 1862.

CHAPLIN'S PATENT PORTABLE
STEAM ENGINES, &c.,
FOR PUMPING AND WINDING.

These engines are SPECIALLY ADAPTED for PITS, QUARRIES, &c. They are EXCEEDINGLY SIMPLE in ARRANGEMENT and STRONG. NO FOUNDATION or CHIMNEY STALK being NECESSARY, they can be ERECTED or REMOVED with VERY LITTLE TROUBLE or EXPENSE, and are WELL ADAPTED for HOME or FOREIGN USE.

Sizes, from 2 to 25-horse power.

TEAM CRANES, STEAM WINCHES, CONTRACTORS' LOCOMOTIVES, HOISTING ENGINES, PUMPING AND WINDING GEARING, &c.

ALEXANDER CHAPLIN AND CO.,
CRANSTONHILL ENGINE WORKS, GLASGOW. 139

PRENTICE'S GUN COTTON
COMPRESSED CHARGES
FOR MINING AND QUARRYING.

The principle thus introduced insures the most perfect attainment of the points essential for the safety and stability of the material, at the same time securing the highest effective power. A charge of any given size exerts six times the explosive force of gunpowder.

The enormous power confined in a short length at the bottom of the hole allows of a much greater amount of work being placed before each blast, saving considerably in the labour of drilling.

Charges are made of every diameter required, the length varying with the diameter. Any number may be placed in a hole. Each charge is fully equal to one-fifth of a pound of powder.

PRICES.

Per case, containing 500 charges of any diameter 35s.

Per half case, containing 250 charges of any diameter 18s.

Per quarter case, containing 125 charges of any diameter 9s.

Terms.—cash.

MANUFACTURED BY THOMAS PRENTICE AND CO., 82, GRACECHURCH STREET, LONDON.

WORKS, STOWMARKET.

LONDON AGENT.—Mr. THORNE.

BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the ROYAL EXHIBITION of 1861; at the

INTERNATIONAL EXHIBITION of 1862, in London; at the IMPERIAL EXHIBITION held in Paris, in 1865; and at the INTERNATIONAL EXHIBITION, in Dublin, 1865.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:

EVERY COIL of FUSE MANUFACTURED BY them has TWO SEPARATE THREADS PASSING THROUGH THE COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

THOMAS TURTON AND SONS, MANUFACTURERS OF

CAST STEEL for PUNCHES, TAPS, and DIES,

TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CRANK PINS, CON-

NECTING RODS, STRAIGHT and CRANK

AXLES, SHAFTS and

FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL FILES MARKED

BLISTER STEEL, SPRING STEEL, GERMAN STEEL,

T. T. T. O. N. EDGE TOOLS MARKED

WM. G. G. E. V. E. S. & S. O. N.

Locomotive Engine, Railway Carriage and Wagon

— Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.

Where the largest stock of steel, files, tools, &c., may be selected from.

BASTIER'S CHAIN PUMP.

This patent pump is the MOST EFFICIENT in existence for LIFTING

ANY QUANTITY of WATER from ANY DEPTH. One lifting from a depth

of 170 ft. may be seen at work daily, on application to the

SOLE LICENSEES,

MESSES. J. JACKSON AND CO., ENGINEERS, 17, GRACECHURCH

STREET, LONDON, E.C.

Who SUPPLY PUMPS and LIQUENCIES.

Communications to Mr. Bastier, the patentee, to be sent to the same address.

AGENT FOR THE COUNTIES OF NORTHUMBERLAND AND DURHAM, YORKSHIRE,

DERBYSHIRE, and NORTH STAFFORDSHIRE,

MR. THOMAS GREENER, MINING OFFICE, NORTHGATE,

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AGENTS FOR SCOTLAND,

MESSES. P. and W. MACLELLAN, 127 and 129, IRONGATE, GLASGOW.

IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT
GRINDERS, MCADAM ROAD MAKERS, &c., &c.BLAKE'S PATENT STONE BREAKER,
OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:

The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour. For the Parys Mining Company, JAMES WILLIAMS.

H. R. Marsden, Esq.

Eaton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.

H. R. Marsden, Esq.

THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so small an article, but now think it money well spent.

WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz.

WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.

Messrs. ORD and MADDISON,

Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.

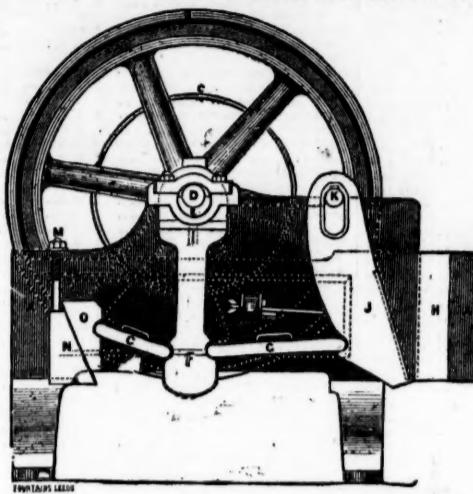
JOHN LANCASTER.

Oroca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.

WM. G. ROBERTS.

General Fremont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate.

SILAS WILLIAMS.



For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,
MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM.

THE NEW PATENT INJECTOR,
FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.

[SPECIFICATION.]

This injector is a steam-pump, constructed on a principle entirely new and of great simplicity. The crank-shaft and fly-wheel are of small size, and the slide-valve is worked inside the steam chest by means of a steel crank and friction roller, thus dispensing with eccentric, rod, and straps. All the working parts are made of steel, hardened and polished. The cylinder and pump are in one casting, and bored throughout the body of the pump as well as the stuffing-box. The pump-rod is of the best gun-metal, being cast in one piece with the piston and piston-rod, and fitted accurately to the bored body of the pump, thus ensuring a nearly perfect vacuum in pumping. The stuffing-box glands are also of gun-metal polished. The valves and boxes are of the best gun-metal, the valves being of the spherical description, the covers fitted with brass cages, and the joints faced metal to metal. The slide-valve is of hard bell-metal. The steam-chest, with cylinder end, is in one piece, and may be removed without disturbing either steam or exhaust pipes. The whole engine may be taken to pieces and put together under steam in fifteen minutes, without disturbing any pipes whatever.

PRICES, DELIVERED IN LONDON:—

Size.	in.	Stroke.	Approx. h.p.	Approx. gallons thrown per hour.	At 100 revs.	150 revs.	200 revs.	p. mln.	Price.
No. 4	1 1/2	3	15	115	172	230	300	£10 10	
5	1 1/2	3	22	180	270	360	480	12 12	
6	1 1/2	4	30	240	360	480	640	14 14	
7	2 1/2	4	40	345	517	690	970	17 0	
8	2 1/2	5 1/2	55	475	712	950	1380	19 10	
9	2 1/2	5 1/2	75	585	877	1170	1650	22 10	
10	2 1/2	6 1/2	90	720	1080	1440	2040	25 10	
11	2 1/2	6 1/2	110	870	1305	1740	2460	28 10	
12	2 1/2	8	120	1030	1545	2060	3110	31 10	

TERMS: Net Cash on Delivery.

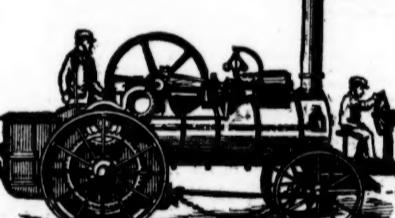
All guaranteed to work efficiently, and any one failing to give entire satisfaction may be at once returned.

This injector will force water at or under a temperature of 212° Fahr. It will draw water 15 ft., or by using one size larger than required for forcing the quantity, it will draw from a depth of 30 ft. It will work with a pressure of steam of 15 lbs. per square inch; to work at a lower pressure the next larger size must be used, which is made with a reduced ram. This instrument will not become encrusted through forcing bad water, and it will force semi-fluids. Any unskilled labourer may work it, and after starting it requires no attention. The ordinary speed of working is 150 revolutions per minute, but higher speeds may be used without harm to the engine. Larger sizes, and special pumps for throwing water into tanks, or for use as fire-engines, can be made in a few days. A circular, with full explanation and comparisons, will be sent on application.

BROWN, WILSON, AND CO.,

80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, LONDON, S.

CLAYTON, SHUTTLEWORTH, AND CO.,
LINCOLN,
And 78, LOMBARD STREET, LONDON.



Illustrated Catalogues containing the latest revised Price Lists and particulars of
PORTABLE AND STATIONARY STEAM ENGINES

(from 4 to 40-horse power), Thrashing, Grinding, Pumping, Sawing Machinery, &c.,
will be forwarded free on application as above.

TRACTION ENGINES for COMMON ROADS, and for STEAM CULTIVATION

NOTE.—Nearly 8000 Engines and 6000 Thrashing Machines have been made by
this firm within the last few years.

THE PATENT PLUMBAGO CRUCIBLE COMPANY.
SOLE MANUFACTURERS UNDER MORGAN'S PATENT,
BATTERSEA WORKS, LONDON, S.W.

Some unprincipled manufacturers having made
such close imitations of our Trade Mark as cannot
fail to deceive the public, we have deemed it ad-

visable to alter our Mark as here shown. It will
be observed that the alteration consists in the

OMISSION of the words—“DEPOTS AT PARIS

AND ROTTERDAM,” and the ADDITION of the

words—“MORGAN'S PATENT.”

In all future orders, please specify “MORGAN'S PATENT,” and address to

BATTERSEA WORKS, LONDON, S.W.

THE NEWCASTLE CHRONICLE AND NORTHERN
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Published every Saturday, price 2d., or quarterly 2s. 2d.

THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Pershare.	Last paid.
500 Alderley Edge, c, Cheshire*	10 0 0	8 12 8 ..	0 5 0	Jan. 1867	
200 Botalack, t, c, St. Just	91 5 0	485 15 0 ..	0 5 0	May, 1866	
10000 British slate Company	10 0 0	9 per cent.	..	Mar. 1867	
4000 Brookwood, t	1 11 0	0 5 0 ..	0 2 6	Sept. 1866	
10000 Broniford, t, Cardiganshire	12 0 0	8 7 0 ..	0 6 0	Aug. 1866	
6400 Cawbush, t, Cumberland*	2 10 0	0 1 6 ..	0 1 6	Aug. 1866	
916 Cargoll, s-l, Newlyn	15 5 7	13 15 0 ..	1 0 0	Feb. 1866	
1876 Cwm Eifrin, t, Cardiganshire*	7 10 0	22 18 0 ..	1 0 0	April 1867	
123 Cwmystrwyth, Cardiganshire	60 0 0	376 10 0 ..	4 0 0	Feb. 1867	
280 Derwent Mines, s-l, Durham	300 0 0	169 10 0 ..	2 10 0	Mar. 1867	
1024 Devon Gt. Consols, t, Tavistock*	1 0 0 .. 400	..	380 400	1084 0 ..	0 6 0	Mar. 1867	
328 Dolcoath, c, t, Camborne	128 17 6	825 10 0 ..	4 0	Apr. 1867	
6144 East Caradon, c, St. Cleer*	24 14 6	14 9 6 ..	2 0	Apr. 1867	
300 East Darren, t, Cardiganshire	32 0 0	140 10 0 ..	2 0	Mar. 1867	
128 East Pool, t, c, Pool, Illogan	24 5 0	392 10 0 ..	2 10 0	Mar. 1867	
5000 East Rosewarne, c, t, Gwinear	2 15 0	0 10 6 ..	0 1 6	Jan. 1866	
1906 East Wheal Lovell, t, Wendron	3 9 0 ..	9 9 9	..	2 15 0 ..	0 7 6	April 1867	
2800 Foxdale, t, Isle of Man*	25 0 0	70 0 ..	0 10 0	Mar. 1867	
5000 Frank Mills, t, Christow	3 18 6 ..	1%	..	3 8 6 ..	0 5 0	Feb. 1866	
2000 Great Laxey, t, Isle of Man*	4 0 0	17% 18% ..	6 5 0 ..	0 10 0	Mar. 1867
5908 Great Wheal Vor, t, c, Helston*	40 0 0 ..	19	..	11 5 6 ..	0 7 6	Mar. 1867	
1024 Herdfoot, t, near Liskeard*	8 10 0 ..	83	..	40 10 0 ..	1 10 0	Feb. 1867	
6000 Hinstone Down, c, t	5 10 6	0 10 0 ..	0 5 0	Apr. 1866	
4000 Lisburne, t, Cardiganshire	18 15 0	489 10 0 ..	3 0 0	Mar. 1867	
9000 Marke Valley, c, Caradon	4 10 6 ..	4 4 4	..	3 14 0 ..	3 0 0	Apr. 1867	
3000 Minera Boundary, t, Wrexham*	1 0 0	0 12 0 ..	0 3 0	Mar. 1867	
1800 Minera Mining Co, t, Wrexham*	25 0 0	150 160	208 13 0 ..	3 5 0 ..	Feb. 1867	
20000 Mining Co. of Ireland, c, t, cl.	7 0 0 ..	17	0 5 7 10 ..	Jan. 1867	
40000 Mwyndy Iron Ore*	3 5 0	0 6 6 ..	0 2 6	Mar. 1866	
— New Merrybent and Middleton*	3 10 0	5 per cent.	..	Nov. 1866	
200 Parys Mines, c, Anglesey*	50 0 0	157 10 0 ..	5 0 0	Jan. 1866	
6000 Prosper United, t, c, St. Hilary	8 14 0 ..	3 4	23 34	0 5 0 ..	0 5 0	Feb. 1867	
1120 Providence, t, Uny Lelant	10 6 7	27 29	82 7 6 ..	0 10 0	Feb. 1867	
512 South Caradon, c, St. Cleer	1 5 0 ..	340	..	550 10 0 ..	6 0 0	Mar. 1867	
6000 South Darren, t	3 6 6	9 5 6 ..	2 6 6	June, 1866	
6000 Tincroft, c, t, Pool, Illogan	9 0 0	18% 12% 18% ..	18 11 0 ..	5 0 0	Jan. 1867
— New Merrybent and Middleton*	3 10 0	5 per cent.	..	Nov. 1866	
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